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to the  
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**programme of  
abstracts**

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Thursday 6 October 2005

## **Platform Presentations**

### **Sessions A.3, B.2, C.3, D.2 and H.2**

Bone, Muscle and Rheumatology

Cardiovascular

Falls, Fractures and Trauma

Health Services Research

Parkinson's Disease

Stroke and Mental Health

1

**PROACTIVE CARE OF OLDER PEOPLE UNDERGOING SURGERY ('POPS'): PILOT EVALUATION**

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**Introduction**

Developmental work for this NSF-driven project showed that older patients undergoing elective surgery in an urban teaching hospital had high preoperative co-morbidity and significant post-operative problems (compatible with published evidence). Charitable funding was obtained for a multidisciplinary team (geriatrician, specialist nurse, physiotherapist, OT, social worker) whose aim was to reduce post-operative problems in at risk older patients through preoperative comprehensive geriatric assessment and treatment in clinic and home. Patients with medical comorbidities were targeted, assessed 2-12 weeks pre-surgery, and followed through surgery to post-discharge.

**Methodology**

Pre-POPS (July2003) and post-POPS (May2004) evaluation of post-operative outcomes in patients aged 65+ undergoing elective orthopaedic surgery. Data collected on surgical wards from notes and staff.

**Results/Conclusions**

	PRE-POPS(n=55)	POPS(n=49)
	Orthopaedic patients aged 65+	
	Unselected	+comorbidities
Mean age(years)	74.9±6.2	73.6±5.2
Hip replacements	29%(16)	35%(17)
Knee replacements	42%(23)	55%(27)
Post-operative outcomes		
Delirium	19%(10)	4%(2)
Pneumonia	20%(11)	4%(2)
Cardiac arrhythmia	15%(8)	4%(2)
Angina/CCF	11%(6)	4%(2)
DVT/PE	11%(6)	2%(1)
Uncontrolled pain	32%(17)	2%(1)
No food >4days	9%(5)	0
Urinary retention	17%(9)	7%(3)
Severe constipation	33%(18)	16%(7)
Bedridden >3days	30%(16)	9%(4)
Mean hospital stay(days)	16.5±14.0(range2-80)	11.3±5.0(2-26)
Delayed discharge (from problems other than surgical recovery)		
-all	72%(39)	23%(10)
-medical illness	37%(20)	11%(5)
-slow rehabilitation	13%(7)	7%(3)
-delayed OT/equipment	22%(12)	8%(2)

These pilot data suggest that POPS resulted in shorter hospital stay (5days) and fewer post-operative problems. A randomised controlled trial is ongoing.

2

**DOES AN EXERCISE PROGRAM FOR FRAIL OLDER PATIENTS WITH HEART FAILURE BENEFIT THEIR INFORMAL CAREGIVERS?**

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**Introduction**

There is increasing support for exercise as useful treatment for heart failure (HF). The impact of exercise training programs for HF on those close to the patient is largely unknown. We examined the effect of a hospital and home-based exercise intervention for frail older patients (>70 years old) on caregiver burden, anxiety and depression.

**Methods**

Randomised Controlled Trial design. 82 HF patients (M age 80.5 years, 44% female) were randomised to a seated 12-week hospital-based exercise program or standard care. Sixty caregivers from this patient sample (M age 63.4 years, 65% female) were recruited. Caregiver measures were gathered at baseline, 3 months and 6 months. Caregiver burden, anxiety and depression were assessed using the Impact of Informal Caregiving Scale and the Hospital Anxiety and Depression Scale.

**Results**

At 3 months there were no differences between caregivers in the two groups on burden, anxiety and depression (p>0.05). At 6-month follow-up caregivers of HF patients that had been in the exercise group had burden scores that were significantly worse than the control group, (F (1,39) =4.29, p<0.05, Eta =0.09). There were no differences between exercise and control conditions in anxiety and depression (p>0.05).

**Conclusion**

The present exercise intervention was associated with increased caregiver burden at 6 months. Future exercise interventions for HF patients should consider actively involving their informal caregivers and evaluating its impact on patient and caregiver outcomes.

## PLATFORM PRESENTATIONS

3

### PREVALENCE OF OSTEOPOROSIS IN MALE FALLERS

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#### Introduction

Osteoporosis is generally considered to be a female disease. Our group has shown that 39% of female fallers have osteoporosis. Prevalence of osteoporosis in male fallers is unclear. Here we examined bone density in a cohort of men attending a falls clinic.

#### Methods

Calcaneal bone density was measured (PIXI) in 108 consecutive men over age 50 attending for assessment after a fall. Bone mineral density was compared to mean values for young males giving T score (SD above or below mean for normal adults). Number of falls, fracture history, medications, weight and height were recorded for each patient.

#### Results

Mean (SD) age was 75(9) years, with mean T score for the cohort being -0.8(1.4). 36 (33%) of male fallers had T score consistent with osteoporosis ( $\leq -1.6$ ). There was no difference between those with, and without, osteoporosis in age, number (or type) of medications, number of falls. However, men with osteoporosis had sustained significantly more fractures (mean (SD) 0.75(1) vs 0.3 (0.6); $p=0.004$ ) and were significantly shorter and lighter (69 (14) kg vs 78 (14); $p=0.0008$ . 169 (7) cm vs 173 (7); $p=0.005$ ). Weight appeared to be a better predictor of osteoporosis than height ( $r=0.36$ ; $p=0.0001$  vs  $r=0.2$ ; $p=0.05$ ).

#### Conclusions

Osteoporosis is common in older men presenting with falls. Prevalence is comparable to that previously documented in older women. Body weight may be a predictor of those at increased risk of osteoporosis in men.

4

### EMERGENCY CARE OF OLDER PEOPLE WHO FALL: A MISSED OPPORTUNITY

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#### Introduction

40% of older people who fall and call 999 are not subsequently conveyed to the Accident and Emergency Department despite an absence of any training or protocols to allow for non-conveyance. This study looks at the service use of older people who were attended by LAS as a result of a fall and not conveyed to hospital.

#### Methods

- Consecutive consenting people aged 65+
- Attended by LAS as a result of a fall between 01/09/03 and 31/10/03
- not conveyed to hospital
- 2 week follow-up of emergency service use.

#### Results

175 were included. Mean age 83yrs and 63.4% female. 83 patients (47.4%) called 999 again within 2 weeks of the original attendance. 39 of these individuals were conveyed to A&E and an additional three (1.7%) attended A&E by other means. 39 patients made more than one call to LAS in the 2 week follow up period. Four patients (2.3%) died, with an increased risk of mortality (SMR) of 5.4 (95% CI = 1.4, 11.9) compared with the general population.

#### Conclusions

The rate of subsequent emergency health care contacts and increased risk of death for older people who fall and are left at home following a 999 call is alarming. Further research is needed to identify the immediate needs of this high risk population such that alternate models of care may be developed to deal with this high use of emergency services

5

**IS SARCOPIENIA ASSOCIATED WITH HEALTH-RELATED QUALITY OF LIFE?**

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**Introduction**

Sarcopenia is the loss of muscle mass and strength with ageing and it is strongly associated with functional impairment, disability and mortality. However few studies have considered the relationship between sarcopenia and health-related quality of life (HRQOL). We investigated this in 3000 men and women aged 60-75 years participating in the Hertfordshire Cohort Study.

**Methods**

Grip strength was used as a marker of sarcopenia and measured using a Jamar dynamometer. HRQOL was assessed using the 8 domains of the 36-item SF-36 questionnaire. Odds ratios (OR) for being in the lowest fifth of each SF-36 domain per kilo decrease in grip strength were calculated using logistic regression. The data for men and women were pooled and all models gender adjusted.

**Results**

Decreased grip strength was most strongly associated with increased odds of poor physical functioning (OR 1.08,  $p < 0.001$ ) and general health (OR 1.07,  $p < 0.001$ ). These relationships were independent of age, height, social class, smoking, alcohol consumption, physical activity and co-morbidity. Those reporting poor general health had significantly lower grip strength than those reporting excellent health: 37.2kg compared with 45.7kg in men and 21.4kg compared with 28.0kg in women.

**Conclusions**

Our findings suggest that sarcopenia is associated with reduced health-related quality of life. This is not explained by the presence of co-morbidity and may reflect the link between sarcopenia and generalised frailty.

6

**ONCE-MONTHLY ORAL IBANDRONATE IS AN EFFECTIVE THERAPY FOR WOMEN WITH POSTMENOPAUSAL OSTEOPOROSIS: 1-YEAR RESULTS FROM MOBILE**

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**Introduction**

Bisphosphonates are first-line therapies in managing postmenopausal osteoporosis (PMO), but adherence to regimens is poor.<sup>1</sup> Adherence is better with weekly than daily bisphosphonate regimens.<sup>1</sup> It is likely that more convenient bisphosphonate regimens may further improve adherence. The MOBILE study (Monthly Oral Ibandronate In LadiEs) investigates efficacy and safety of monthly oral ibandronate in PMO; 1-year results are reported here.

**Methods**

MOBILE, a phase III, double-blind, non-inferiority study (n=1,609), compares the efficacy and safety of three monthly oral ibandronate regimens (50mg on two consecutive days; 100mg or 150mg, single day) with the proven oral daily regimen (2.5mg; 62% vertebral fracture risk reduction<sup>2</sup>).

**Results**

Lumbar spine bone mineral density (LS BMD) at 12 months increased by 3.9%, 4.3%, 4.1% and 4.9% in the 2.5mg daily, 50/50mg, 100mg and 150mg monthly groups, respectively. Monthly ibandronate was at least as effective as daily by fulfilling the non-inferiority criteria, and 150mg monthly demonstrated superiority ( $p=0.002$ ). Monthly and daily oral ibandronate were well tolerated, with no apparent differences in nature or frequency of AEs.

**Conclusions**

Once-monthly oral ibandronate is as well tolerated and at least as effective as the proven daily formulation. Monthly regimens may offer a more convenient dosing interval, which may enhance adherence, potentially improving efficacy in patients with PMO.

- 1 Cramer JA et al. JBMR 2004;19(Suppl 1):M434
- 2 Chesnut CH et al. JBMR 2004;19:1241-9

7

**COPYING OVERLAPPING PENTAGONS PREDICTS THE ABILITY TO ACQUIRE COMPETENCE WITH A TURBOHALER IN ELDERLY HOSPITAL INPATIENTS**

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**Introduction**

Previous studies have shown that cognitive, praxis and executive tests can predict the ability to acquire inhaler technique in old age. The pentagon copying test from the Mini-Mental State Examination (MMSE) is a test of those functions, so could be superior to other tests for predicting successful inhaler technique acquisition

**Methods**

We studied 49 inhaler-naive inpatients (8 men, mean age 82). Subjects with severe dementia (MMSE < 11), acute confusion, poor vision and/or hearing or overt dyspraxia were excluded. All performed the Abbreviated Mental Test (AMT) and MMSE. The overlapping pentagon component of the MMSE was recorded separately. All underwent standardized Turbohaler training and their Turbohaler competence was assessed against agreed criteria the next day.

**Results**

Ninety three percent of patients with an AMT >7 were competent compared with 55% incompetent with an AMT <8 (P=0.0004). 73% with an MMSE >23 were competent compared to 81% incompetent with an MMSE <24 (P<0.0001). Competence was seen in 74% of those able to copy pentagons compared to 87% incompetence in those unable to copy pentagons (P<0.0001). The Sensitivity and Specificity of Pentagon Copying was 59% and 93%, compared to 59% and 73% for MMSE and 54% and 93% for AMT

**Conclusion**

Pentagon copying is a useful screening test to identify patients who are not likely to acquire an adequate Turbohaler technique, and performs marginally better than the AMT and MMSE.

8

**THE PERFORMANCE OF THE CLOCK DRAWING TEST IN ELDERLY MEDICAL INPATIENTS: DOES IT HAVE UTILITY IN THE IDENTIFICATION OF DELIRIUM?**

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**Introduction**

Delirium is common among elderly medical inpatients. The Clock Drawing Test (CDT) is a useful bedside tool in assessing cognitive impairment. We report an investigation of the CDT in the detection of delirium, about which there is limited previous research.

**Methods**

Cognitive function and the presence and severity of delirium were prospectively assessed in consecutive acute admissions to an elderly medical unit. Assessment included CDT, Mini-Mental State Examination (MMSE), Confusion Assessment Method (CAM+=delirium), Delirium Rating Scale (DRS), and these were repeated every third day (+/-1) until day18, and on discharge or day28. Two blinded assessors scored the CDTs independently. Data was analysed using a linear mixed model.

**Results**

220 assessments including 181 CDTs were performed on 94 subjects (59% male, mean age 82.1 years, mean hospital stay 18.7 days). The mean MMSE score was 18.8. Subjects were delirious (CAM+) in 56 (25.5%) assessments. There was a significant correlation between the CDT and DRS scores (Pearson correlation r=-0.602,p<0.001) and MMSE (r=0.702,p<0.001). The computed model using patients as random effects, CAM, DRS and MMSE as fixed effects, showed significant correlation between the MMSE and CDT scores (p<0.0001). CAM and DRS had no additional effect.

**Conclusion**

Therefore CDT score reflects cognitive impairment, independently of the presence of delirium, and cannot differentiate between dementia and delirium. Neither is it useful in monitoring the course of delirium in this group.

9

**EFFECTS OF DISCONTINUING  
DONEPEZIL TREATMENT ON  
COGNITION AND FUNCTION IN  
PATIENTS WITH ALZHEIMER'S DISEASE**

*P CROME<sup>1</sup>, R HILLS, P BETHAM, C COURTNEY, S EDWARDS, R GRAY, W HARDYMAN, J RAFTERY, E SELLWOOD FOR AD2000 COLLABORATIVE GROUP*

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**Introduction**

It has been reported that stopping donepezil treatment is associated with rapid non-reversible decline in benefit and that this may represent a disease modifying effect. We have used data from the AD2000 trial to investigate this.

**Methods**

AD2000 was a randomised, double-blind, placebo controlled trial of donepezil and aspirin in DSM IV Alzheimer's Disease (Lancet 2004; 363: 2105-15). After phase I (60 weeks) patients underwent a 6 week washout and could choose whether to restart treatment. They were reassessed 12 weeks afterwards (week 78). Cognition was measured by mini-mental state examination (MMSE) and function by Bristol Activities of Daily Scale (BADLS)

**Results**

Cognition and function deteriorated in both groups between weeks 60 and 66 (Effect size 1.03 (s.e. 0.39) MMSE points and 1.38 (s.e. 0.55) BADLS points). Those restarting treatment showed greater deteriorations: (1.45 (s.e. 0.63) and 2.47 (s.e. 0.76) for MMSE and BADLS respectively. The "bounce back" in those restarting the drugs was 2.84 (s.e. 0.63) and 2.57 (0.76) MMSE and BADLS points between weeks 66 and 78

**Conclusion**

A fall in MMSE and BADLS when discontinuing donepezil is confirmed. Patients who restarted treatment had greater falls in MMSE and BADLS than those who withdrew from the trial. The "bounceback" on restarting treatment was greater than the fall on stopping the drug. This evidence does not support the hypothesis that donepezil has a disease modifying action.

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**THE ABCD SCORE- A SIMPLE TOOL TO  
IDENTIFY INDIVIDUALS AT HIGH AND  
LOW EARLY RISK OF STROKE AFTER  
TRANSIENT ISCHAEMIC ATTACK**

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**Introduction**

Early management of TIA patients is undermined by the inability to predict which patients are at high (and low) risk of stroke. A simple predictive score derivable at presentation could facilitate triage and management in primary and secondary care.

**Methods**

We derived a score for 7-day stroke risk in a population-based cohort with definite TIA (Oxfordshire Community Stroke Project - OCSF, n=209), and validated the score on another population-based cohort (Oxford Vascular Study - OXVASC, n=190). We assessed clinical usefulness by using the score to stratify all suspected TIA patients referred to OXVASC (n=378, outcome: 7-day risk of stroke) and a hospital-based weekly TIA clinic (n=210; outcome: risk of stroke prior to appointment).

**Results**

A six point score derived from OCSF (calculated from **A**ge, **B**P, **C**linical features and symptom **D**uration) was predictive of 7-day stroke risk in all validation populations. In the OXVASC suspected TIA cohort, 7-day stroke risk was 0.4% (95% CI. 0 - 1.1) in 274 (73%) patients with a score <5, 12.1% (4.2 - 20.0) in 66 (18%) with score=5, and 31.4% (16.0 - 46.8) in 35 (9%) with score=6. In the hospital-referred weekly clinic cohort, 14 (7.5%) patients had a stroke prior to scheduled appointment, all with score =4.

**Conclusion**

The 7-day stroke risk after TIA can be predicted by a simple clinical score.

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**DEMONSTRATION OF COGNITIVE DECLINE IN PARKINSON'S DISEASE USING THE CAMBRIDGE COGNITIVE ASSESSMENT (REVISED) (CAMCOG-R)**

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**Introduction**

Cognitive impairment is well recognised in Parkinson's disease (PD) but few studies have examined cognitive decline over time in such subjects. Standard clinical cognitive assessments, such as the MMSE, do not measure all cognitive 'domains' and often have a ceiling effect. CAMCOG-R provides a complete cognitive assessment allowing several different domains of cognition to be compared. It has only been used on one previous occasion in PD subjects and this is the first study to use a follow-up CAMCOG-R to assess cognitive decline.

**Methods**

In a previously published study CAMCOG-R was administered to a prevalent, community-based population of 94 PD subjects with a MMSE of 25 or above. In this subsequent study 85 of these subjects (2 declined and 7 deceased) underwent a follow-up CAMCOG-R after a mean delay of 13.1 months.

**Results**

The initial and follow-up median total CAMCOG-R scores were 89/104 and 85/104 ( $p < 0.05$ ) respectively. Significant cognitive decline ( $p < 0.05$ ) was seen across every CAMCOG-R cognitive domain.

**Conclusions**

A wide range of cognitive ability was again demonstrated using CAMCOG-R in this PD population. The decline of 4 CAMCOG-R points over the 13-month period compares to other previous studies showing an annual decline of 1.6 CAMCOG points in normal elderly individuals and 12 CAMCOG points in those with established dementia. This study suggests that CAMCOG-R is a viable tool for use in follow-up cognitive screening in PD subjects.

12

**CENTRAL AND PERIPHERAL AUTONOMIC INTEGRITY IN PARKINSON'S DISEASE**

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**Introduction**

Autonomic dysfunction (AD) occurs in Parkinson's disease (PD), Multiple System Atrophy (MSA) and Pure Autonomic Failure (PAF). Patients with MSA have a central (hypothalamus) lesion characterized by failure to increase arginine vasopressin (AVP) following a Head-up Tilt (HUT). Patients with PAF have peripheral lesions characterized by low basal nor-adrenaline (NA), and smaller increase in NA following HUT. The exact mechanism of AD in PD is unclear and we hypothesize that they have both central and peripheral lesions because of the widespread distribution of Lewy bodies.

**Methods**

Thirteen 13 PD patients and six age matched controls free of any other disease or drugs known to affect the autonomic function were studied. Patients' usual medications remained unaltered. We performed a battery of cardiovascular autonomic function tests and measured NA and AVP at supine position and 10 minutes after a 60° HUT.

**Results**

Six patients had sympathetic failure (postural hypotension) and seven did not. Patients with sympathetic failure had a statistically smaller increase in NA and AVP ( $p < 0.05$ ) following HUT compared to patients and controls without sympathetic. All PD patients had a lower basal NA and a smaller increase in NA ( $p < 0.05$ ) following HUT compared to controls. Parasympathetic tests were difficult to perform and interpret because of fatigue, tremor and dyskinesia.

Sub-group	Nor-Adrenaline nmol/l			AVP pg/ml		
	Basal	HUT	Increase	Basal	HUT	Increase
Sympathetic failure	1.9	2	0.12	1.12	1.09	0.05
No sympathetic failure	1.68	2.34	0.66	0.72	1.67	1.09
Controls	2.51	3.56	1.04	1.2	1.77	0.56

**Conclusions**

Our novel finding is that that PD patients with sympathetic failure have both central and peripheral lesions. Even patients without overt sympathetic failure showed peripheral lesions.

KNOWLEDGE OF INPATIENTS WITH  
PARKINSON'S DISEASE

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**Introduction**

Well-informed patients with Parkinson's Disease (PD) are better placed to make decisions about treatment. The aim of this study was to determine the knowledge of inpatients with PD about PD.

**Method**

40 PD inpatients in a District General Hospital completed a true/false knowledge questionnaire about PD and a Hospital Anxiety and Depression score (HAD).

**Results**

There were 20 men (50%). Mean age was 77 years (range 60-90 years). Mini-mental state examination (MMSE) score varied from 18-29 (mean 26). Patients scored a mean of 10 out of 22 on the knowledge test (range of 3-14). 7 (17.5%) thought PD could be cured by medicines. 18 (45%) thought poor movement was a side effect of PD medicines. 11 (29%) would carry on taking the medicines even if they were experiencing side effects. 5 of 37 who responded (13.5%) would double the dose at the next drug time if they missed a dose. There was a non-significant trend for negative correlations with MMSE (Spearman's rank correlation  $p=0.68$ ), HAD anxiety ( $p=0.44$ ) and depression ( $p=0.36$ ) scores. 10 PD Society members scored a mean of 11.4 non-significantly better than the 30 non-members 9.5 (Mann Whitney  $p=0.62$ ).

The scores of patients who saw a PD Nurse (15/40) or attended a PD clinic (15/40) were no better.

**Conclusion**

Some patients' knowledge seemed dangerously deficient. Patients who attended specialist PD services were not shown to be better informed.

**Poster presentations**

CLINICAL EFFECTIVENESS

*Audit*

*Literary Review*

*Practice*

BONE, MUSCLES AND RHEUMATOLOGY

CARDIOVASCULAR

DIABETES

EPIDEMIOLOGY

FALLS, FRACTURES & TRAUMA

GASTROENTEROLOGY

HEALTH SERVICES RESEARCH

INCONTINENCE

LAW & ETHICS

NEUROLOGY & NEUROSCIENCES

OTHER MEDICAL CONDITIONS

PARKINSON'S DISEASE

PSYCHIATRY & MENTAL HEALTH

STROKE

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AUDIT OF CARIOVERSION AND ANTICOAGULATION FOR ATRIAL FIBRILLATION

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**Introduction**

Increasing age ( $\geq 75$  years) is a risk for stroke in patients with AF. Recent studies of AF suggest rate-control and anticoagulation may be preferable to rhythm control and recommend long-term warfarin in high-risk patients even after conversion to sinus rhythm. We sought to audit current DC cardioversion (DCCv) practice at our hospital, with regard to anticoagulation decision, and DCCv in the elderly patients.

**Methodology**

We performed a retrospective case-note review of all patients attending our hospital for DCCv during 2004. Data regarding DCCv and subsequent follow-up was available for 86/106 patients. We recorded age, sex, AF duration, comorbidities (including echocardiogram results), and anticoagulation strategy following DCCv. The CHADS<sub>2</sub> score was obtained to stratify stroke risk.

**Results**

20/86 cases were  $\geq 75$  years of age. Sinus rhythm was initially restored in 79/86 (18/20  $\geq 75$  years) but AF recurred in 36/79 (8/18  $\geq 75$  years) at the last follow-up (mean 15 weeks). Nine patients were not managed with long-term warfarin, and plan was to omit warfarin in another 10 patients who maintained sinus rhythm including two above 75 years, each of which had CHADS<sub>2</sub> score of two.

**Conclusion**

Only a small proportion of DCCv cases were  $\geq 75$  years old. DCCv failed to result in long-term sinus rhythm in around half of the patients. Not all individuals at increased stroke risk were maintained on long-term warfarin.

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THE PROCESS OF STROKE CARE IN A NEUROVASCULAR CLINIC

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**Introduction**

National Guidelines for Stroke emphasize the importance of early referral of transient ischaemic attack (TIA) and minor stroke. This study describes the process of care in a neurovascular clinic in accordance with these guidelines.

**Methodology**

Data were collected over a one year period in patients assessed in a neurovascular clinic. Waiting time for assessment, diagnostic investigations and secondary prevention were measured.

**Results**

146 patients were studied, mean age 69.6 (standard deviation 12). 101 (69%) were diagnosed with TIA (55) and stroke (46). Waiting time for appointments were 0-14 days (101, 69%). Brain imaging was performed in 84 (58%) of which 53 (63%) were done the same day. Carotid duplex was performed in 90 (62%) of which 48 (53%) were done within one week. Of 5 (5%) with symptomatic carotid stenosis, all had to wait over 21 days for surgical assessment and then over 30 days from assessment to endarterectomy. Risk factors identified included atrial fibrillation in 7 (7%), all of whom were commenced on warfarin. All those (54, 53%) with cholesterol over 3.5mmol/l were prescribed statins. All those (20, 20%) with suboptimal blood pressure control (over 140/80mmHg) were prescribed anti-hypertensives.

**Conclusions**

Although risk factor therapy was favourable, prolonged waiting times for imaging and surgical review may result in clinically important delays. Neurovascular clinics require closer links with primary care, radiology and vascular surgery in order to be effective.

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EVALUATING EXPECTED AND UNEXPECTED DEATH AMONGST OLDER INPATIENTS

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**Introduction**

In 1993 York Hospital was found to have a high Standardised Mortality Rate (SMR). As a significant proportion of deaths occur in older subjects, we undertook a prospective audit to examine characteristics of inpatient deaths >75 years to determine possible causes e.g. excess unexpected deaths or terminal care admissions.

**Method**

All records for deaths occurring over 3 months were audited by independent consultant geriatricians. 25 random notes, were reassessed by 2 other clinicians to determine accuracy. Reviewers were asked to assess cause of death and whether death was expected on admission, became expected during admission or was unexpected. Case notes on patients felt to have died unexpectedly were re-reviewed by 2 further consultants to determine if issues of concern existed.

**Results**

There were 167 (male 40%) deaths over the study period from 1229 (male 39%) admissions (Mortality rate: 13.6%). 47 (28%) deaths were classified as 'expected at admission'. These included 16 (34%) patients with stroke and 7 (15%) patients with terminal malignant disease.

Of 135 deaths occurring >48 hours after admission, 21 (16%) were determined unexpected. 71% of unexpected deaths were men versus 38% of expected deaths (p<0.01 chi-square). Intraobserver agreement between assessors for expectation of death was good (k=0.65 Cohen's Kappa).

**Conclusion**

There is an excess of unexpected deaths amongst elderly male inpatients. The largest group of patients felt to be 'dying at admission' were those with stroke.

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RETROSPECTIVE ANALYSIS OF PATIENTS WITH CVA IN A RURAL AREA TO DETERMINE THE PROPORTION POTENTIALLY ELIGIBLE FOR THROMBOLYSIS

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**Introduction**

Objective was to find the number of patients who presented with symptoms of CVA to our hospital and fulfil the criteria for thrombolysis in stroke and thereby identify barriers to thrombolysis.

**Method**

49 patients who presented with stroke during April-June 2004 were considered, after excluding those with symptoms for <30min. Inclusion and exclusion criteria as guided by SITS-MOST (Safe Implementation of Thrombolysis in Stroke - Monitoring Study) were applied to the sample to filter patients who would have been fit for thrombolysis.

**Results**

Of the 49 patients who presented with stroke symptoms, 23(47%) presented within 3hrs, 2(4%) had stroke as inpatients, 7(14.2%) were unaware of time, and the rest 17(34.7%) presented in >3hrs time.

Of the 25 (23+2) presenting with in 3hrs, 5 did not have CT done (death) & 7 had haemorrhage, leaving 13 patients excluded of haemorrhage.

Of these 13, 3 were >80 yrs, 2 had bladder carcinoma (bleeding risk) and 1 had BP above limit (systolic>185 or diastolic >110), leaving 7 patients with no contraindications for thrombolysis.

**Conclusion**

In retrospective analysis 14% appear to be eligible for thrombolysis. Most of them arrived between 2 to 2 1/2 hrs after onset of symptoms leaving 30-60 min for triage, basic clerking, bloods, CT and initiation of thrombolysis. Getting a CT arranged in time will be another hurdle as most of them (65%) got their scans done after 24hrs.

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**BLOOD PRESSURE MONITORS - A LOST CAUSE?**

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**Introduction**

The British Hypertension Society (BHS) provides a list of validated Blood Pressure Monitors (BPMs) for clinical use and the standard cuff sizes. An audit of BPMs in 2003 at one of the hospitals of the Trust had identified significant problems. The results were presented at a Trust-wide Audit Meeting and were made known to the Trust Governance and Medical Directors.

**Method**

A re-audit in 2005 was extended to all four hospitals of the Trust. Trained observers collected data regarding BPMs and cuffs prospectively. They visited and completed a proforma for each ward/clinic area except ICU, HDU, CCU and Renal unit. BHS guidelines were used as the standard.

**Results**

A total of 565 BPMs at 142 wards/clinics across four different hospitals of the Trust were scrutinised. Only 18% of wards/clinics had all the three standard cuff sizes available. One hospital had a large number of un-serviced mercury devices. Only 5% of the automated BPMs were validated for hospital use. There was no regular maintenance of BPMs across the Trust. There had been no improvement since the previous audit.

**Conclusion**

Blood pressure readings taken routinely in the wards and clinics would have a high probability of being inaccurate and lead to poor management of patients. The audit was submitted to the Trust Medical Director and Governance Director for urgent action.

*Reference- British Hypertension Society Guidelines: 2004*

*Following the audit, the Trust allocated £15,000 towards implementing the recommended changes*

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**DOES THE 4-HOUR WAIT IN ACCIDENT AND EMERGENCY (A&E) DISCRIMINATE AGAINST NIGHT-TIME FALLERS?**

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**Introduction**

Standard 6 of the National Service Framework for Older People recommends that older people who fall and attend A&E should be referred to a specialist falls service. The NHS Plan states that all A&E patients should be admitted, discharged or transferred within 4 hours. We looked at the effects of this target on provision of a specialist falls service.

**Method**

A Falls Nurse was employed as part of a pilot study for setting up a specialist falls service. During June-October 2004, we assessed time of attendance of fallers in A&E; likelihood for admission; documentation of falls risk factors by A&E staff and feasibility (if attended during the period 05:00-17:00) for assessment by the Nurse.

**Results**

The Nurse identified 726 fallers aged 65+. Of these, 490 (68%) attended during the hours of 05:00-17:00, of whom 143 (30%) required admission. A similar proportion of those attending between 17:01-04:59 were admitted. In 33% of cases, falls risk factors were not documented or were unknown by A&E staff. 15% of fallers were suitable for onward referral to a Falls Clinic.

**Conclusion**

The 4-hour wait target may mean that 1/5 fallers attending A&E could miss assessment by a Falls Nurse. Since documentation of falls risk factors in A&E is poor, these patients need assessment by a falls specialist. Alternatively, other procedures need to be developed to ensure onward referral to a Falls Clinic.

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**AUDIT OF STROKE PATIENTS SHOWING THE EFFECT OF THE NATIONAL 4-HOUR WAITING TIME TARGETS AND THE OPENING OF AN EMERGENCY ASSESSMENT UNIT (EAU) ON STROKE ADMISSIONS**

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**Introduction**

We have audited stroke admissions annually since 1999, comparing our performance to the Royal College of Physicians guidelines. Introduction of a proforma significantly improved many aspects of stroke assessment and care. (Hall & Jones, poster, BGS autumn 2002). In 2004 admission practices were changed in order to meet government targets and an EAU with dedicated therapy staff and rapid access to CT scanning opened.

**Methods**

Audits were of all inpatients with stroke on a single day. In 2005 comparison was made between patients admitted to different locations in the hospital and by different teams.

**Results**

There has been a dramatic reduction in proforma usage for medical admissions this year. A quarter of stroke admissions went to EAU where waiting times for scans and physio have improved.

	2003	2004	Total 2005	Medical 2005	Elderly care 2005	EAU 2005
Patients	37	27	39	18	11	10
Proforma use	50%	70%	56%	0%	73%	50%
CT within 24 hrs	54% (48 hrs)	37% (48 hrs)	60%	55%	55%	80%
Wait for physiotherapy (days)	10	N/A	5.7	7.2	5	3.9

**Conclusions**

Efforts to improve the speed of admission of patients at Mayday have resulted in a reduction in proforma usage and thus poorer quality assessment. The opening of the EAU has reduced scan and physio delays. We still do not meet national guidelines.

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**FRACTURED NECK OF FEMUR AUDIT**

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**Introduction**

Literature suggests that joint orthopaedic and geriatric care, and geriatric orthopaedic rehabilitation units, would provide best care for fractured neck of femur patients (FNOF). There is to date no quantitative data. This completed audit quantifies the care provided in the first phase solely by orthopaedic team, and in the repeat phase with additional regular geriatric input.

**Methodology**

Retrospective completed audit of FNOF patients admitted under orthopaedics and treated operatively. First phase analysed 72 patients with sole orthopaedic care. Repeat phase analysed 25 patients after the introduction of an orthogeriatric SHO and geriatric ward rounds.

**Results**

First audit phase of orthopaedic care alone found that 50% patients/day were reviewed in the first post op 7 day week (FPOW); mean number of reviews in FPOW was 3; a minority never had post-op bloods or xrays prior to discharge; ad hoc medical input occurred in 50% patients.

Repeat audit of orthogeriatric care found that 75% patients/day were reviewed in FPOW; mean number of reviews in FPOW rose to 5; all patients had timely bloods and xrays; medical input rose to 80%; length of stay and mortality were reduced.

**Conclusion**

The clinical risk of FNOF patients was reduced on the appointment of an orthogeriatric SHO in combination with formal reviews by consultant geriatrician. Further models of care are being evaluated. This audit adds evidence that joint care is better for elderly FNOF.

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**IMPROVING OUTCOMES IN A CARE OF THE ELDERLY DEPARTMENT.**

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**Introduction**

The changing demographics is putting pressure on services for elderly care. The study was undertaken at the department of care of the elderly, to see the effects of simple changes in practice on improvement in care, within available resources.

**Methodology**

The hospital mortality, length of stay, rate of discharge to institutions and average number of monthly admissions were analysed, for the period of one year starting from 1st August 2002 to 31st of July 2003, before interventions. The interventions were put in place for the same period, following year, i.e. 1st of August 2003 till 31st of August 2004.

The following intervening policies were implemented:

- ◆ One consultant led ward round per ward per week was added, mainly to look into medical problems.
- ◆ All patients on admission, were seen by consultants, personally.
- ◆ Clinical notes including management plan were written in an explicit manner to assist all working colleagues.
- ◆ All discharge plans and discharge medications were supervised personally by a consultant.
- ◆ The medications were scrutinised, stringently. The NSAIDs, sedatives, antipsychotic drugs and diuretics were kept to minimum use without compromising patient comfort. The long acting nitrates, calcium channel blockers and alpha blockers were used rationally. The antihypertensives were spread during day than all in one dose. The Co-amoxiclav was preferred over cephalosporins to treat community acquired pneumonia.
- ◆ The educational opportunities were reinforced on the topic of drug-age interactions.

**Result**

Period	01/08/ 2002 to 31/07/03 Before interventions	01/08/03 to 31/08/04 During interventions
Total no. of admissions	407	511
Mean no. of admissions per month	33.9	39.3
Total no. of deaths and	49	37
<b>Percentage</b>	<b>12%</b>	<b>7.2%</b>
Mean Length of stay in days per patient who went to institution	58	49.5
Number of discharges to institutions and percentage	98 <b>24%</b>	112 <b>21%</b>

**Conclusion**

The consultant driven practices, strict protocol on rational use of drugs, explicitness in clinical notes, explicit discharge plan and rigorous education of junior staff can bring favourable results in hospital mortality, length of stay and discharges to institutions; in the care of the elderly department.

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**EXTENT OF COGNITIVE ASSESSMENT DURING ADMISSION AND DISCHARGE OF ELDERLY MEDICAL PATIENTS IN A DISTRICT GENERAL HOSPITAL**

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**Introduction**

Cognitive function assessment should be an integral part of all elderly admissions and discharges as it reflects functional status, illness severity and need for multidisciplinary discharge planning. Our aim was to assess the extent of this and whether incorporating Abbreviated Mental Test (AMT) into a standard proforma improves compliance.

**Methodology**

Retrospective analysis of 100 elderly medical admissions for the following:

- ◆ Whether AMT score (AMTS) was documented by:
  - A&E doctor
  - Medical doctor clerking on a proforma incorporating an AMT;
- ◆ If AMTS was not documented on admission, whether it was checked on the ward;
- ◆ Whether AMTS was documented at discharge.

**Results**

- ◆ 6% of A&E clerkings documented an AMTS.
- ◆ 77% of elderly proformas had AMTS documented with a further 7% having documented failed attempts, e.g. due to drowsiness or poor cooperation.
- ◆ 13% of AMTS not checked on admission were checked later on the ward.
- ◆ Only 1% of patients had AMTS documented at discharge.

**Conclusion**

Cognitive assessment by A&E doctors should be part of all elderly patient's risk assessment and work-up for referral to the medical team, yet this was not the case. The medical team performed better at admission, largely due to the proforma incorporating an AMT. However, discharge AMTS checks were very poor. We propose that incorporating AMT into admission and discharge proformas, with purposeful inductions on this issue are needed.

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WITHDRAWN

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**DIAGNOSIS OF URINARY TRACT INFECTION (UTI) AMONGST ELDERLY PATIENTS IN HOSPITAL**

WITHDRAWN

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**Introduction**

UTI is frequently diagnosed in elderly in-patients. We took a snapshot of current in-patients and audited the diagnosis of UTI, comparing it to NHS best-practice guidelines (PRODIGY).

**Methodology**

Over 2 weeks, 35 medical inpatients were being treated for UTI. We recorded how many urine dipsticks were tested, and were positive for leucocytes or nitrites. We noted how many had urine sent to Microbiology, and the proportion of positive samples. We noted the choice of antibiotic.

**Results**

30 of the 35 patients had a urine dipstick test prior to starting antibiotic therapy. 25 of these tested positive for either leucocytes or nitrites. 26 of these 35 had urine sent for microscopy and culture, but only 17 of these 26 (65%) had significant bacterial growth (47% was E.coli, 41% was mixed bacterial growth. Trimethoprim was the most popular antibiotic (46% of patients), but 4 of 35 patients were resistant to the original antibiotic used.

**Conclusion**

Current practices require improvement. Urine culture ultimately confirms diagnosis and guides antimicrobial therapy, yet was sent in only 74% of cases. UTIs are over-diagnosed, with only 65% of cultures positive for bacteria. Antibiotic choice requires thought, and local guidance. To over-treat older people with antibiotics for a clinical diagnosis of UTI may be as harmful as failing to monitor antibiotic sensitivity in those who have UTI.

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**PUTTING EVIDENCE INTO PRACTICE -  
USE OF A BEDSIDE FALLS FORM ON A  
REHABILITATION WARD FOR OLDER  
PERSONS**

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**Introduction**

There is increasing evidence that falls in hospital can be reduced by targeting prevention measures at those identified as high risk. We developed a bedside falls form containing a risk assessment tool and a prompt for targeted measures and audited its use in a rehabilitation ward for older persons.

**Methods**

In phase 1 medical notes of consecutively discharged patients were audited against defined standards for falls risk assessment documentation and the use of falls prevention measures (n=52). The frequency of falls in this group was recorded. In phase 2 a bedside falls risk assessment form was designed and used on the ward. A repeat of the phase 1 audit was carried out (n=100).

**Results**

In phase 1, 30 patients (57.7%) had a falls risk assessment but in no cases was this assessment adequately completed. 9 patients (17.3%) had falls prevention measures identified. 11 patients (21.2%) had one or more falls. In phase 2, 98 patients (98.0%, p<0.0001) had a falls risk assessment, and in 96 cases (98.0%, p<0.0001) this was adequately completed. 97 patients (97.0%, p<0.0001) had falls prevention measures identified. 16 patients (16.0%, p=0.5) had one or more falls on the ward.

**Conclusions**

The use of a bedside falls form improved the frequency and adequacy of falls risk assessments, increased the use of falls prevention measures and was associated with a reduction in falls on the ward.

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**PERCUTANEOUS CORONARY  
INTERVENTION IN OCTOGENARIANS IN  
CONTEMPORARY PRACTICE**

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**Introduction**

With technological advances and availability of newer anti-platelet agents, percutaneous coronary intervention (PCI) in octogenarians is increasingly common. We assessed the safety and short-term outcomes of (PCI) in octogenarians.

**Methods**

Retrospective review of case notes of consecutive series of 52 patients of  $\geq 80$  years of age who had PCI between January 2001 and June 2003 at tertiary referral centre.

**Results**

Mean age 82.7 years (range 80-94), 58% male, 20(38%) had history of myocardial infarction (MI), three had undergone CABG 7, 15 and 19 years previously. 23(44%) were hypertensive and 10(19%) were diabetic. The clinical presentation was acute coronary syndrome in 16 (31%) and 4 (8%) underwent PCI in an acute MI setting. Glycoprotein IIb-IIIa receptor inhibitor was used in 50% while 48(92%) received concomitant clopidogrel. All the lesions were treated with stent (100%). One patient developed catheter induced dissection of left main artery. Ventricular fibrillation and ventricular tachycardia developed during the procedure in one patient each requiring DC cardioversion. Four patients developed groin hematoma. Tortuosity of iliac arteries and presence of calcium did not influence the outcome. None of the patients required coronary bypass surgery and there were no deaths.

**Conclusion**

PCI can be performed safely in patients  $\geq 80$  years of age with excellent success rate. The presence of an acute coronary syndrome does not increase the risk. The short term results are comparable to their younger counterparts.

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**OUR MULTIDISCIPLINARY APPROACH TO FEEDING AND FLUIDS IN EAST CHESHIRE NHS TRUST**

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**Introduction**

Dysphagia is common in patients with stroke. Presence of aspiration may be associated with an increased risk of developing pneumonia after stroke. We conducted a survey on the screening, temperature monitoring, initiation of intravenous (IV) fluids, and formal Speech and Language Therapy (SLT) review.

**Methodology**

Random, retrospective case note analysis of patients admitted between 1/9/04 to 31/3/05. Data analysed using comparative analysis.

**Results**

n 48 M-21, F-27 Age 77.4 (46-92), (sd10.9) Results show swallow screening by doctors in 66.7%, of which 50% reported swallowing problems. Nurses screened 62.5%, within 24 hours. Not all the same patients were common to both groups. SLT saw 36.9% patients, predominantly those documented as having swallowing problems. 76 % of patients had their IV fluids started within 24 hours. However, the mean waiting time for IV fluids was 13 hours (range 17 minutes to 5 days!) On average patients were without enteral intake for 1.4 days (range 0-20). 100% had their temperature recorded on admission, out of which 15% were pyrexial. 22.9% had chest infection on admission.

**Conclusion**

Promote education and training of medical and nursing staff regarding initial assessment of swallowing, how to diagnose and manage dehydration. Provide a forum for multi-professional discussion of end of life issues, in the form of legal and ethics study days. Try to establish an early multidisciplinary problem solving approach. Re-audit at a later date.

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**DIABETES IN CAUCASIAN AND SOUTH ASIAN TIA / STROKE PATIENTS : LOW REPORTING WARRANTS HEALTH AWARENESS AND ACTIVE SCREENING PROGRAMME**

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**Introduction**

Diabetes and atrial fibrillation (A.F) are two important risk factors for transient ischaemic attack (TIA)/ stroke. The prevalence of diabetes is increased in South Asians by three fold compared with Caucasians (23% vs 7%). Our aim was to determine the prevalence of diabetes and A.F amongst patients referred to our Neurovascular Clinic for symptoms of TIA / stroke in Coventry which has high ratio of South Asian population (11.3% vs 4.3% in England).

**Subjects/Methods**

We reviewed clinical notes of 94 consecutive patients of mean age 68 (53 females) referred during a six month period, 80% via General Practitioner. Only 6 were of S.Asian origin.

**Results**

52/94 (56%) had a confirmed diagnosis of TIA/stroke (24 male, mean age 68)

Only 2 were S Asians, rest Caucasians.

Only 4 had diabetes (all Caucasians).

6 had A.F (all Caucasians).

Only 1of 6 S Asians referred to clinic had type 2 diabetes

**Discussion**

The number of S Asians referred to the clinic was unexpectedly low. The findings showed low prevalence of A.F and diabetes in TIA/Stroke patients, especially in S Asians, although diabetes is significant risk factor for A.F and stroke/TIA. These data highlight the important need for health promotion strategy that include screening for diabetes in S Asians with cardio/neurovascular histories and to ensure that they have equitable access to neurovascular investigations. This is particularly relevant in communities with a large number of S Asian residents.

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**BRAIN IMAGING AND THE USE OF ASPIRIN IN PATIENTS ADMITTED WITH ACUTE STROKE**

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**Introduction**

Brain imaging and the use of aspirin in acute stroke influence its prognosis. We present here an audit cycle after the development of local guidelines on brain imaging in acute stroke and the treatment of acute ischaemic stroke.

**Methods**

All adult patients admitted with acute stroke in the years 1998 & 2003 were included. Local guidelines were developed in 1999:

- ◆ brain imaging should be within 48 hours of stroke onset and no later than 7 days with the aim of detecting intracranial haemorrhage
- ◆ patients with acute ischaemic stroke should be prescribed aspirin 300mg followed by 75 mg daily and patients in atrial fibrillation should be anticoagulated by the time of discharge unless contra-indicated

**Results**

Brain imaging in acute stroke was 66%(243/369) in 1998 & 84%(294/394) in 2003. 23% of patients had brain imaging within 24 hours of stroke onset in 2003. In 1998, Aspirin was prescribed in 87% and anticoagulation for AF in 67%. In 2003 the respective figures were 82% and 71%.

**Conclusions**

Brain imaging for acute stroke improved after the development of local guidelines. To meet the current Royal College of Physicians guidelines on brain imaging in acute stroke within 24 hours of onset we are developing dedicated daily scanner & reporting time. We have modified our stroke clerking & discharge proforma to prompt documentation of reasons for not prescribing aspirin or anticoagulation.

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**EVALUATION OF STAFF'S EXPECTATIONS REGARDING RELOCATION TO A NEW STROKE UNIT**

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**Introduction**

Different types of stroke unit organization can be identified and sometimes is necessary to make changes in order to improve care.

The aim of this study was to evaluate the staff's expectations and experiences before and after movement to a new integrated stroke unit.

**Methodology**

Two-questionnaire surveys pre and three months post movement was conducted.

Questionnaire containing questions regarding information about the relocation, quality of care, communication, discharge planning, teamwork and overall expectations for the new unit was distributed to staff

**Results**

35 and 30 staff participated in the first and second survey respectively, with 26 having taken part in both surveys.

Response rates were 98% and 82%, and mean completeness of the questionnaires was 96% and 94%, respectively

Most staff felt information regarding movement was adequate. Overall there were high expectations that the new stroke unit would improve patient care, discharge planning, and communication with patients and relatives.

Three months post relocation, the staff felt several aspects of care, and especially quality of therapy, communication and quality of care had all improved. But there was no perceived improvement in quality of discharge planning, teamwork, and overall expectations have not been met.

**Conclusion**

This study provides information about staff's expectations and experiences with relocation to new stroke unit

There is need to involve staff in planning relocation of a stroke unit, so that expectations are not too high.

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**DNR ORDERS AND THEIR ASSOCIATIONS WITH PRE-ARREST MORBIDITY SCORES**

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**Introduction**

'Do not resuscitate' (DNR) orders are being increasingly debated by clinicians and the general public. Validated scores that enable DNR decisions to be made more objectively are available, such as pre-arrest morbidity score (PAM). This study aimed to determine completion rates of resuscitation forms, and estimate the association between DNR orders and PAM scores.

**Methods**

Cross-sectional survey of in-patients in an elderly-care unit. Data included demographic information, premorbid Barthel index (BI), Mental Test Score (MTS), and resuscitation status. Their PAM scores (0-24) were also calculated. DNR forms were audited against guidelines issued by the local resuscitation committee.

**Results**

Of 93 subjects recruited {mean age(sd) 82.6yrs(7.5)}, 21(23%) had DNR forms completed. All forms were written legibly. DNR was not discussed with 16(76%) patients and not with relatives in 8 cases (39%). 8 (39%) were not signed by the consultant/SPR at the time of DNR decision. DNR decisions were made in patients who were older (85.6vs82.6,p=0.03), had lower mean MTS (4.1 vs5.6,p=0.03) and lower mean BI (7.9 vs12.1,p<0.001). Multivariate logistic regression showed DNR decisions were independently associated with PAM (OR 3.79, 95%CI 1.8-7.9;p<0.001) and BI (OR 0.79,95%CI 0.64-0.98;p=0.032).

**Conclusions**

In this unit, DNR forms were completed adequately. Discussion with patient/relatives and senior ratification needs to improve. As DNR decisions correlated well with PAM scores, these scores should be used more frequently to lend objectivity to this highly ethical and subjective decision.

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**ABBREVIATED MENTAL TEST SCORE: HOW GOOD IS THE ASSESSOR?**

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**Introduction**

Delirium is common and under-recognised. The abbreviated mental test score (AMTS) is a standardised test of cognitive function. It has been shown to aid management of delirium. The aim of this study was to assess whether AMTS was being done on elderly admissions and whether medical staff could ask the correct 10 standardised questions.

**Methods**

Use and accuracy of AMTS was audited on elderly inpatients. Reason for admission was documented to see if this influenced whether the AMTS was performed.

Medical staff were then asked to write down all AMTS questions under direct observation.

**Results**

100 notes were analysed. 37% had an AMT score documented. Only 42% patients admitted with "confusion", 27% with known dementia and 17% where history not taken from the patient had an AMT score. Of the 37 documented only 25 were out of 10. 16 had written the questions asked. None were completely correct.

43 staff members were questioned. 74% only recalled 10 questions. 43.5% of answers were from the AMTS. 1 person asked all correct 10 questions. Elderly care physicians recalled better than General medical physicians (50% vs. 38%). 40% of wrong answers were questions from the Folstein test.

**Conclusions**

Ability to perform the AMTS is poor and detection of delirium may be inadequate. There is confusion between AMTS and Folstein test.

Education and use of admission proforma may improve detection of cognitive impairment.

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COMPARISON OF METABOLIC PARAMETERS IN DIABETIC CARE HOME RESIDENTS WITH RECENT TARGETS SET BY THE EUROPEAN DIABETES WORKING PARTY FOR OLDER PEOPLE (EUROAGE DIABETES): AN IMPROVING AREA BUT WITH CONTINUING EVIDENCE OF SUB-OPTIMAL ATTAINMENT

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**Introduction**

Diabetes care within care homes has been associated with a lack of structured care and poor glycaemia - a third had HbA1c levels >11.0% (Sinclair AJ et al, Diabetes Care 1997; 20:778-84). We compared recent European-wide targets (available from www.eugms.org) specific to care homes with baseline results from residents involved in our primary diabetes care home study.

**Methodology**

108 residents (64-96 yrs, mean 81 yrs, 33 males) with diabetes from 54 residential homes in Coventry and Warwickshire participated. Measures included blood pressure (Systolic/Diastolic), HbA1c, fasting glucose, and lipids (cholesterol and triglycerides).

**Results**

The percentage of residents satisfying targets with observed ranges were Systolic Blood Pressure (<150, 95-217 mmHG), 57.4%; Diastolic Blood Pressure (<90, 46-121 mmHG), 89.8%; HbA1c (>7.5-'less than or equal to'8.5, 4.6-12.1%), 13.9%; Fasting Glucose Level (>7-'less than or equal to'9, 2.7-17.4 mmol/l), 16.7%; cholesterol (<5, 2.4-8.4 mmol/l), 52.8%; Triglycerides (<2.3, 0.5-6.4mmol/l), 76.9%. 66% of residents had HbA1c levels below 7.5%, and 57.4% had Fasting Glucose Levels below 7 mmol/l. Also, 22% and 20% had HbA1c levels and Fasting Glucose Levels below 6% and 5 mmol/l respectively.

**Conclusion**

Outcomes were better than expected although Blood Pressure control (which may be more important in frail subjects) remains a major challenge. The continuing emphasis on glycaemic targets may be in part misplaced as 1 in 5 residents are at serious risk of hypoglycemia.

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AUDIT OF RECOGNITION AND ASSESSMENT OF DELIRIUM IN AN ACUTE AND REHABILITATION GERIATRIC SERVICE

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**Introduction**

Delirium is a common condition, particularly in the elderly, and despite its associated morbidity and mortality still goes unrecognised by clinicians.

**Objectives**

To evaluate and improve the recognition and case note recording of delirious patients presenting to our Geriatric Unit.

**Methods**

We audited against guidelines endorsed by the British Geriatrics Society.

Medical patients over the age of 78 referred to our Geriatric Unit over a two-week period were entered into the audit. Relevant data was then collected for a further two weeks.

Following the initial audit, ward staff received an educational package consisting of a one hour formal presentation and group discussion.

Twelve weeks later an identical audit took place.

**Results**

Out of 216 patients referred to our Unit during the first audit cycle only 44 (25.5%) had an abbreviated mental test score (MTS) recorded on admission and less than 5% underwent confusion assessment method (CAM). After implementation of change 56.6% of patients underwent MTS, CAM use increased (32%) and more confused patients were appropriately referred to the Mental Health Team for further assessment (5.7 versus 33%).

Local guidelines for the assessment and management of delirium are in place and will be audited in the Autumn of 2005.

**Conclusion**

The audit process in itself has improved clinical practice within the unit by raising awareness of the topic amongst junior staff and other members of the multi-disciplinary team.

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**CARDIOPULMONARY RESUSCITATION (CPR): CAPACITY, DOCUMENTATION & DISCUSSIONS**

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**Introduction**

Assessing the capacity of patients to make a decision is done poorly on general wards. If capacity is retained it is good practice to ask the patient their opinion about CPR. Lack of capacity puts the onus on the multi disciplinary team to act in the best interests of individuals whilst involving their family.

**Method**

Notes review of in-patients on elderly wards in acute trust to examine resuscitation status, documented discussions with the patient or their family and whether the issue of capacity was addressed.

**Result**

104 patients: 44 male, 60 female. Age range 66-96 years. CPR decision was made in 37 cases. 8 patients were for CPR (discussed with 7) and 29 patients were not for CPR. There had been a discussion with the family about the decision in 13/37 cases.

Communication of the decision to the multi-disciplinary team was excellent. There was marked variation in decisions made between Consultant teams ranging 10-80% of patients. Capacity was documented in only 4 cases.

**Conclusion**

Capacity was poorly assessed in this group and Consultant teams vary enormously in their effectiveness in making CPR decisions. Too often, families are not informed about decisions where capacity is lacking. This potentially leaves clinicians and Trust open to criticism.

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**EVALUATION OF AN IN-PATIENT INTERMEDIATE CARE SERVICE AT A COMMUNITY HOSPITAL, 1999-2005**

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**Introduction**

Although Intermediate Care(IC) was included in the National Service Framework for Older People(2001), its effectiveness has not been extensively evaluated. This study investigates clinical outcomes of an in-patient IC service operating since 1999.

**Methods**

Length of stay(LOS) and discharge destination(DD) were assessed for the first 103 patients admitted in 1999-2001 and 103 consecutive patients admitted in 2004-2005. The early cohort were assessed in the acute hospital by a specialist IC team nurse before transfer. Due to organisational changes, the latest cohort were moved at the discretion of acute hospital teams only. The groups were compared statistically for LOS (Mann-Whitney test) and DD (Chi-squared test).

**Results**

Mean LOS fell significantly from the first to second cohort (28.4, standard deviation 13, to 23.1, standard deviation 16.5, days,  $p=0.001$ ). Significantly fewer patients were discharged to their own home in 2004-2005 compared to 1999-2001 (63% and 85% respectively,  $p=0.001$ ). However, significantly more were transferred back to acute hospital wards (16.5% and 9% respectively,  $p=0.04$ ), almost all due to severity or complications of the original condition(s), not new medical events.

**Conclusion**

These results suggest increasing "error" in selection of patients for IC. Possible reasons include high demand for acute hospital beds overriding clinical judgement. Conflict between capacity pressures in acute services and patients' clinical needs may result in inappropriate transfers to IC. Further evaluation and local consultations are needed to resolve this issue.

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READMISSION RATES ON PATIENTS WHO USE THE BURY INTERMEDIATE CARE SERVICE

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**Introduction**

Most centres use 1-month readmission rates to judge the effectiveness of their Intermediate Care (IMC) services. We however, feel that a 3-month readmission rate is more useful as it gives a better indication of clinical effectiveness and helps direct future planning.

With this in mind, we set out to look at the readmission rates from the Bury IMC service. This service provides 43 residential care based beds. It admits patients mainly from the district general hospital site for ongoing rehabilitation and also assessment prior to residential care. The maximum period of stay here is 6 weeks.

**Methodology**

Patients transferred to IMC between 1st November 2003 and 30th April 2004 (a 6 month period) were identified and tracked for readmissions using the hospital PAS system. Hospital case notes were used to ascertain outcomes on readmitted patients.

**Results**

There were 105 admissions to IMC for the period in total. 95 cases were audited (10 excluded). The readmission rate was 37% at 3 months. 49% were readmitted directly from IMC. The remaining 51% happened after discharge from IMC. Half of these patients readmitted were eventually discharged home while 23% required residential care. The home discharge rate on all 95 patients was 80% despite the readmissions.

**Conclusion**

The patients using the IMC are frail elderly with ongoing medical problems who have a high readmission rate to hospital. We have shown that with proper intervention, specialist input and discharge planning, these patients can eventually still be supported at home. IMC could also be a useful source to identify patients for active case management.

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QUININE FOR NOCTURNAL LEG CRAMPS IN OLDER PEOPLE- IS IT SAFE, PRESCRIBED APPROPRIATELY AND MONITORED ADEQUATELY?

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**Introduction**

Idiopathic nocturnal leg cramps occur commonly in the older population. They are associated with many common diseases and medications. Quinine is often used as first line treatment for cramps but has potentially serious side effects. Current prescribing recommendations are for a short trial of treatment, with 3 monthly reviews.

**Methods**

A prospective audit was carried out of 40 consecutive admissions to the department of elderly medicine at York hospital, who were taking quinine for cramps. A review of coexisting diseases and medication that may contribute to cramps was undertaken, and the QTc interval monitored. An age matched control group was studied.

**Results**

The age range of patients was 71-92 years. 65% of patients had a disease frequently associated with cramps. 77.5% of patients on quinine were on at least one medication that could cause cramps. There was no difference in the QTc interval in the quinine group to control group (p=0.93). There was a relative contraindication to quinine therapy in 55% of patients. No serious adverse effects were identified. No patient had their quinine therapy reviewed as recommended.

**Conclusion**

In this small group, Quinine appeared to be safe in the treatment of nocturnal leg cramps. However, guidelines for initiation and review of the drug were almost never met; it was frequently prescribed when relatively contraindicated and other causes for leg cramps were often not considered.

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**ANTI-THROMBOTIC TREATMENT IN STROKE: A SURVEY OF CLINICAL PRACTICE IN THE WEST MIDLANDS**

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**Introduction**

National guidelines recommend that stroke patients should receive aspirin (300mg) as soon as possible following acute ischaemic stroke. They also recommend anticoagulants to be started in atrial fibrillation (AF) not until 14 days have passed from the onset of an ischaemic stroke. We assessed the knowledge of clinical guidelines and different practices in all hospitals of the West Midlands.

**Methods**

A questionnaire was sent to 388 consultants and specialist registrars who participate in acute medical admission to ascertain: (a) the knowledge of guidelines (b) timing of aspirin administration whether before or after CT head scan (c) initial dose of aspirin (d) timing to start warfarin, when indicated, following ischaemic stroke for patients with AF.

**Results**

The response rate was 55% (213/388). Of those responders, 80% had some knowledge of the guidelines.

A higher percentage reported to prescribe aspirin immediately on admission (before CT scan), if ischaemic stroke was suspected, than those waiting for the scan [57% vs. 40%,  $p < 0.05$ ]. 3% felt their practice is variable depending on the delay in performing CT scan.

As per the initial aspirin dose, 46% would start on 300mg, 14% on 150mg, 31% on 75mg, and 9% did not mention any dose.

For warfarin therapy, 29% would start anticoagulation immediately in patients with AF following ischaemic stroke, whilst 33% suggest waiting for 2 weeks, and the rest of responses showed different time intervals between 3 days up to 6 months.

**Conclusion**

There was wide variation in practice, and several deficiencies in the management of acute stroke were identified. These are potentially easily rectifiable and full implementation of the guidelines is feasible.

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**AN AUDIT OF THE IMPACT OF IMPLEMENTATION OF A STROKE CARE PATHWAY IN AN ACUTE TEACHING HOSPITAL**

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**Introduction**

Patients with acute stroke are admitted and managed by general medical teams in our hospital. In 2002, a clinical audit based on standards provided by the RCP(London) was performed in order to benchmark our performance against participants in the UK National Audit(2002) of stroke management. The recommendation was to introduce a stroke care pathway.

**Methods**

In 2002, the management of a random sample of stroke patients (48/131), mean age 78, was retrospectively compared with RCP guidelines. The management of 52 consecutive stroke patients, mean age 77, admitted between December 2004 and March 2005 was audited, subsequent to the pathway introduction.

**Results**

In 2005, 23% (12/52) of patients had a CT Brain scan within 24 hours of stroke as compared with 30% (14/47) in 2002. Aspirin was administered within 48 hours in 40% (16/40) of relevant patients compared to 26% (7/27) previously. Despite the existence of the pathway, within the first 24 hours 69% of hypoxic patients (11/16) did not receive oxygen supplementation or medical review. Blood glucose was not regularly monitored in 67% (35/52) of patients.

**Discussion**

The overall management of acute stroke post implementation of a stroke care pathway was not significantly improved. This is probably due to the absence of organised stroke care. The development of a stroke unit with a specialist consultant-led multidisciplinary team is now being planned.

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PALLIATIVE CARE FOR ELDERLY PATIENTS DYING IN AN ACUTE GENERAL HOSPITAL

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**Aims**

To review the management of elderly patients dying in an acute general hospital and ascertain whether patients could have been managed in the community.

**Methods**

Retrospective casenote review of 25 patients who died while under the care of a medicine for the elderly (DME) service in one month. Basic demographic information, circumstances of admission and details of end of life care were collected.

**Results**

72% female patients, mean age 81.4 years. Admitted from own home(64%), nursing home(20%), another family home and sheltered accommodation(8% each). Admission possibly avoidable in 24%. No documentation of the terminal phase of illness in 16%, of discussion with patient or family regarding dying in 20%. 43% of Do Not Resuscitate decisions were made in the last 48 hours of life.

Of those patients recognised to be in pain, 50% had no analgesia, 67% of those agitated had no anxiolytic, 75% of patients with known nausea and vomiting had no anti-emetic prescribed. 33% of patients with pharyngeal secretions were not prescribed an appropriate agent.

**Conclusions**

This study reveals room for improvement in the terminal care of elderly patients. Much could be achieved by a programme of education in the principles of communication, symptom control and good documentation. The growing involvement of DME and palliative care professionals in community care should limit unnecessary admissions of terminally ill elderly patients to hospital.

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WITHDRAWN

WITHDRAWN

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**INTERMEDIATE CARE - FINDING OUT WHAT PATIENTS AND CARERS THINK**

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**Introduction**

Increasingly, we need to find out what our patients think of us and our services. We surveyed patient satisfaction within one local intermediate care facility (ICF) used for complex discharge planning away from the acute hospital.

**Methodology**

Over 5 months, 143 postal questionnaires were sent to patients within 2 weeks of discharge from the ICF. We sought views on patient understanding of their illness, rationale for transfer, communication and discharge plans.

**Results**

Response rate was 93 of 143 (68.5%), 63% female, mean age 82 years. 32% answered questionnaires themselves, others required assistance from their carer. 80% of patients felt ready to leave hospital and 72% were happy to go to an ICF. Only 59% of patients felt they were given sufficient information about their illness prior to transfer. Whilst in the ICF, over 80% felt they were treated with kindness and respect and that their needs were well attended to. Only 62% felt able to talk to staff about their problems. 69% felt that they received sufficient help in planning their discharge. Following discharge, over 70% of patients felt they were receiving sufficient support and were living in their place of choice.

**Conclusions**

The majority of patients and their carers were satisfied with the ICF experience. Further effort is needed to improve communication, and standardised continuous audit of patient views is both planned and required.

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**PARKINSON'S DISEASE: ARE PATIENTS GIVEN OPTIMAL CARE?**

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**Introduction**

Parkinson's disease (PD) results in direct health and social care costs of nearly £600 million each year in the UK. Highest PD costs are for older people with advanced disease. (Findley et al, Movement Disorder 2003;1139-1145).

Morbidity associated with PD is reduced by a multidisciplinary approach. We aimed to review the management of patients with PD in a large district general hospital in relatively affluent Surrey.

**Methods**

Current practice was audited prospectively via questionnaires and interviews in accordance with the guidelines. (Bhatia et al, Hospital Medicine 2001;456-470).

**Results**

38 patients, 24 males, aged 55 - 92 years; Important findings were: only 5(14%) were seen by a speech therapist despite 27(71%) having swallowing or speech difficulties; 11(29%) had both. 5(13%) were started on dopamine agonist. 11 patients were diagnosed with PD since the guidelines were published, 2 (18%) were started on a dopamine agonist. These 2 were under 70; the other 9 were over 70. 18 patients were driving or did drive when diagnosed; 10(56%) were warned, 13(72%) informed the DVLA and 5(28%) said they are not safe whilst driving.

**Conclusions**

This showed that PD patients are not having all their multidisciplinary needs met, especially seeing a speech therapist. They are not being commenced on dopamine agonists. Warning regarding driving was infrequent. Guidelines need to be followed so as to improve patient care and reduce costs.

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DOUBLE CONTRAST BARIUM ENEMA-  
THE CORRECT INVESTIGATION OF  
LOWER GASTROINTESTINAL  
SYMPTOMS IN PATIENTS AGED 80  
YEARS OR MORE?

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**Introduction**

An increasing proportion of patients referred to the colorectal surgical clinic for investigation of lower gastrointestinal symptoms are aged over 80 years. Traditionally the radiological investigation of choice for these patients has been a double contrast barium enema. We aim to show that the diagnostic yield is unacceptably low and that this is a poor utilisation of resources in this age group.

**Method**

One hundred consecutive patients aged 80 years presenting to the colorectal outpatient clinic with no sinister pathology on digital rectal examination and rigid sigmoidoscopy, but in the presence of lower gastrointestinal symptoms, were referred for a double contrast barium enema. All studies were reported by consultant radiologists with a specialist interest who were blinded to the ongoing audit.

**Results**

100 patients (64 female, 36 male). Mean age 84 years (range 80-95). 60 studies were reported as being unsuitable for excluding significant lower gastrointestinal pathology. The reasons for inadequate studies were as follows; redundant colon 27, inability to retain contrast 22, poor patient mobility 5, inadequate bowel preparation 3, excess spasm 2, patient refusal 1.

**Conclusions**

We believe double contrast barium enema to be an unsuitable investigation in this age group. Computerised tomography colonography or colonoscopy should be considered depending on local availability and expertise.

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PERSISTENCE OF SYMPTOMS IN CHRONIC  
HEART FAILURE (HF) DUE TO LEFT  
VENTRICULAR SYSTOLIC DYSFUNCTION  
(LVSD) DESPITE OPTIMISATION OF  
STANDARD MEDICAL THERAPY; RESULTS  
FROM A DGH NURSE-LED HF CLINIC

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**Introduction**

Nurse-led HF clinics have been advocated to translate trial evidence into clinical benefit. We followed 100 consecutive patients, attending the nurse-led HFC with chronic LVSD over 2.5 years. We assessed (a) optimisation of treatment, (b) mortality (c) symptomatic improvement.

**Methods**

Three-monthly follow-up; minimum of 2.5 years. Repeated treatment up-titration irrespective of age. Optimal treatment defined as no medication change at two successive HFC visits. Symptoms defined by NYHA class. Mortality from local records.

**Results**

Mean age: 70.2 +/- 10.2 years (84% male).

Baseline LV function: EF<25% -- 18%; EF 25-35% -- 54%; EF 35-45% - 20%; objective LVSD -- 8%.

Baseline NYHA: Class I -- 2%; Class II -- 74%, III -- 21%; IV -- 4%.

Baseline therapy: ACE inhibitor -- 84%; angiotensin receptor blocker -- 15%; beta-blocker -- 32%; spironolactone -- 49%.

After 2.5 years: 75 % on optimal treatment. 19 deaths (17 cardiac); total mortality rate 8% p.a. Of survivors: Symptoms NYHA: Class I -- 3 (4%); Class II - 66 (81%), III -- 12 (15%); IV -- 1 (1%). Therapy: In all patients dosage adjustment occurred. ACE inhibitor - 80%; angiotensin receptor blocker -- 19%; beta-blocker -- 59%; spironolactone 54%.

**Conclusion**

A DGH nurse-led HFC delivers levels of optimized therapy and mortality rates comparable with outcomes of randomized trials. Despite optimal therapy only minor symptomatic improvement occurred. Emphasis on better symptom control is needed.

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WITHDRAWN

WITHDRAWN

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MEASUREMENTS OF IMPAIRMENT AND/ OR DISABILITY IN PARKINSON'S DISEASE- AVAILABLE EVIDENCE

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**Introduction**

Parkinson's disease (PD) assessment includes multidisciplinary approach using measurements to capture therapy interventions. Guidance on choosing validated scales is not widely available.

**Methods**

Locally used scales (in the region) were obtained through physiotherapists.

A literature search was performed to obtain evidence on validity and reliability of scales, used generally.

Searched: OVID, MEDLINE, Cochrane, EMBASE, CINAHL, Yahoo, NMAP, Google, PD society web page.

Key words: Parkinson's disease, impairment, disability, rating scales, physiotherapy, physical therapy, clinical, rehabilitation, measurement and clinimetrics.

Included: Randomised controlled trials, meta-analysis, systematic reviews, Validity and/or reliability studies and PD work packages.

Period: 1966 - end of August 2004.

**Results**

Locally, five different scales were being used. Literature search had identified eighty scales for motor and non-motor assessment, then sub grouped into Impairment, Disability and Mixed. Unified Parkinson's Disease Rating Scale and Hoehn Yahr scale had more evidence. There was also evidence on validity and reliability and strengths and weaknesses on other commonly used scales.

**Conclusions**

A wide variety of measurements were being used locally and generally.

More accurate PD assessment can be performed by using reliable and validated scales that can be identified through a literature search. Guidance on the use of validated scales should be more easily accessible.

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**CARDIOPULMONARY RESUSCITATION (CPR) DECISIONS. HAS THE HIGH COURT RULING ON THE GENERAL MEDICAL COUNCIL (GMC) END OF LIFE GUIDELINES CHANGED PRACTICE?**

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**Introduction**

Our audits (Diggory et al. Clinical Medicine. 2004; 4: 424.) demonstrated a fall in CPR decision rates and proportion of Do Not Attempt Resuscitation (DNAR) orders when our interpretation of the GMC guidelines (Audited Sept 2001) insisted on discussion with patients with 'respect' for their wishes before making DNAR orders. In November 2004 the GMC guidelines on end of life decisions were held unlawful by the High Court; we performed an audit to see if this has influenced departmental CPR decision making.

**Methodology**

On a single day the CPR decisions on all our in-patients were reviewed.

**Results**

Age, Barthel and mental test scores were similar for all audits.

Audit 7 showed a fall in the proportion of CPR decisions that were DNAR orders for both Juniors and consultants.

Audit Cycle	Number (%) of CPR decisions within 24 hours	Number (%) of Consultant decisions that were DNAR
1 (n=148) May 2000	135 (91%)	94 (70%)
2 (n=140) Feb 2001	133 (95%)	101 (76%)
3 (n=119) Sept 2001	96 (81%)	54 (56%)
4 (n=157) May 2002	148 (94%)	106 (72%)
5 (n=169) Sept 2003	167 (98%)	102 (62%)
6 (n=171) Sept 2004	163 (93%)	121 (70%)
7 (n=181) May 2005	163 (91%)	93 (51%)
Total (n=1112)	1005 (90%)	671 (64%)

**Conclusion**

Concerns about the legality of making end of life decisions may be reducing the numbers of DNAR orders.

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**SURVEY OF INFLENZA VACCINE AMONG CARE OF ELDERLY STAFF AT JAMES COOK UNIVERSITY HOSPITAL**

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**Introduction**

Department of Health Guidelines recommend that all staff involved in direct care of patients should be immunised with 'Influenza vaccine' in order to reduce transmission to patients and to reduce sickness leave. We wanted to know how many of them are immunised, whether they were aware of the DOH guidelines and reasons for not being immunised.

**Methods**

A questionnaire was designed and was given to 160 staff members working in the Care of Elderly department. 80 were completed and were returned for analysis.

**Results**

On analysis we found 79% of staff was not vaccinated. 58% were aware of DOH guidelines. 72% were aware of availability of Influenza vaccine with Trust's occupational health department. Being too busy, concern over side effects, lack of awareness of guidelines were the common reasons given for not having vaccine.

Percentage of vaccination among senior staff was better [100%] compared to more junior staff [15-20%]. After this audit 76% are willing to have vaccine in Autumn 2005. Those 24% who are still reluctant to have vaccine are concerned over side effects.

**Conclusion**

We recommend more education to health care staff. Vaccine should be made easily available. Vaccination programme should be closely monitored. And a re-audit should be done at the same time next year to see whether this audit has made in difference in practice.

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END-OF-LIFE DISCUSSIONS WITH OLDER PATIENTS

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**Introduction**

Discussing death and end-of-life decisions with patients is widely recommended but occurs infrequently. The purpose of this study was to identify patients' opinions and attitudes towards end-of-life discussions.

**Methodology**

The study was based on acute Care of the Elderly and rehabilitation wards in a Merseyside district general hospital. Interviews with patients were conducted at the end of a standard medical clerking. Each patient who agreed to participate were asked a series of identical questions.

**Results**

n = 23

26% were excluded due to history of depression or severe cognitive impairment. 18% declined to interview.

No patient recalled an end-of-life discussion with a physician although 36% had thought about these issues.

Most patients did not have any specific fears about dying. 36% worried about the effects their death would have on family members.

36% were religious and most said it influenced their thoughts on dying.

21.5% wanted all possible life-sustaining treatments.

50% did not want treatment if mentally incapacitated. 64% wanted their family to make decisions if they themselves were unable. 21.5% thought a physician should decide.

None of the patients reported any adverse emotional effects as a result of the discussion.

**Conclusions**

The majority of patients are willing and want to discuss end-of-life care with their physicians. End-of-life discussions should address not only decisions concerning life-sustaining treatments but also patients' physical, emotional and spiritual needs.

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THE PROGNOSIS AND MANAGEMENT OF OLDER PEOPLE ADMITTED UNCONSCIOUS TO ACCIDENT AND EMERGENCY

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**Introduction**

Whilst a perception exists that older people admitted unconscious to A&E have a poor prognosis, little objective outcome data exists. We undertook an audit of A&E admissions to examine aetiology, management and prognosis of such admissions to determine need for treatment guidelines.

**Methodology**

Records for admissions over 5 months were reviewed to identify subjects  $\geq 70$  years admitted with a Glasgow Coma Scale (GCS)=8, but not in cardiorespiratory arrest. Initial and eventual diagnosis, outcome, ventilation and CT scanning decisions were recorded. Outcomes of patients with GCS=3 were compared to those GCS 4-8

**Results/Conclusions**

Of 2849 records reviewed, 42 patients (52% M) with GCS =8 were identified, 20 of whom had GCS=3. Twenty eight (67%) of the patients died. GCS =3 alone however was a poor predictor of mortality (GCS=3 55% vs GCS 4-8 77%) possibly due to the prevalence of seizures in the GCS=3 group. Subjects  $\geq 80$  years had a poorer prognosis than younger patients: (mortality 47% vs 80%  $p < 0.05$  chi square). CT scanning was inconsistently performed. Of 29 patients with a contemplated diagnosis of Stroke or Seizure only 15 (52%) underwent CT of which 10 (34%) had a stroke confirmed. A frequent reason for not scanning was perceived lack of influence on likely management/ outcome. However outcome on scanned patients was not significantly better suggesting the need for more specific guidelines for management and investigation of unconscious older people

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### SURVEY OF IMAGING FACILITIES FOR ACUTE STROKE PATIENTS IN THE UK

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#### Introduction

At present CT is the most commonly used type of scan to assess patients with acute stroke in the UK. However, MR scanning has several potential advantages over CT, especially for selecting stroke patients for thrombolytic therapy for stroke. We aimed to assess the feasibility of using MR scanning as the primary imaging method in patients with acute stroke in the UK.

#### Methods

We developed a simple one page survey and sent it to the most relevant senior stroke clinician for every acute hospital in the UK, seeking details of CT and MRI capacity to scan patients with acute stroke (i.e. within 12 hours of symptom onset).

#### Results

From the first posting to 265 hospitals, 222 responded (84%). Of these: 97% had a CT scanner; 76% had an on site MRI facility but, of those with an MR, only 22% ever used it for imaging acute stroke patients.

#### Conclusion

CT scanning is now almost universally available and must therefore - for now - remain the primary imaging method for patients with acute stroke. If new emergency treatments for stroke depend on rapid access to MR, further investment in equipment and staff will be needed.

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### BONE MINERAL DENSITY (BMD): CORRELATION BETWEEN TOTAL HIP AND FEMORAL NECK MEASUREMENTS

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#### Introduction

There is much debate around the use of dual energy X-ray absorptiometry (DEXA) in the elderly. The National Institute for Clinical Excellence suggest there is no need for DEXA in those over 75. Treatment decisions can be based on risk assessment scores alone. Femoral neck BMD correlates best with hip fracture, and is often the measurement of choice in trials. Correlation between total hip and femoral neck BMD was investigated.

#### Methods

Between October 2002 and March 2005 277 DEXA scans were requested. Data was analysed using EXCEL.

#### Results

256 women and 21 men were scanned. Mean age was 69.6 years for women (range 32 to 89), and 64.2 years for men (range 23 to 84). 48 women and 1 man had T-scores less than -2.5 standard deviations at total hip (17.7%). Overall correlation between total hip and femoral neck was 0.87, however there was a significant decrease with increasing age: 0.93 for those aged 51-55, 0.78 for those aged over 80 ( $p < 0.05$ ). Of patients not osteoporotic on total hip measurement, 27 had T-scores less than -2.5 at femoral neck (11.8%). Of those not osteoporotic at femoral neck, only 7 were highlighted when looking at total hip scores. Similar differences were seen looking at osteopenic patients.

#### Conclusion

Correlation seems to decrease with increasing age, and total hip measurement seems to miss a significant percentage of those with osteoporosis.

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### INTRAVENOUS IBANDRONATE INJECTION: 1-YEAR RESULTS FROM DIVA

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#### Introduction

Oral bisphosphonates in postmenopausal osteoporosis (PMO), may be unsuitable for some patients, due to difficulties swallowing tablets and/or maintaining postural requirements needed for oral administration. Ibandronate is a bisphosphonate, studied as both oral and intravenous (i.v.) formulations. The ongoing 2-year DIVA (Dosing IntraVenous Administration) study compares the efficacy and safety of i.v. ibandronate (15-30 seconds injection) with oral daily ibandronate (proven fracture efficacy<sup>1</sup>).

#### Methods

DIVA is a double-blind, double-dummy, non-inferiority study of 1,395 women with PMO. Subjects were randomised to either i.v. ibandronate (2mg/2 monthly, or 3mg/3 monthly) or daily oral ibandronate (2.5mg). The primary endpoint was change from baseline of lumbar spine bone mineral density (LS BMD) after 1 year. Adverse events (AEs) were continuously monitored.

#### Results

At 1 year, substantial LS BMD increases were observed in all arms: 5.1%, 4.8% and 3.8% for 2mg/2mo, 3mg/3mo and 2.5mg/day, respectively. Both i.v. ibandronate regimens were shown to be non-inferior (1% margin) and in addition superior ( $p < 0.001$ ) to the daily oral regimen. Drug-related AEs, in particular renal AEs, were infrequent and similar across all treatment arms.

#### Conclusion

I.v. ibandronate, which can be rapidly administered as an i.v. injection, is at least as effective and well tolerated as daily oral ibandronate, and can offer effective and convenient treatment for those patients unable to take or tolerate oral bisphosphonates.

1. Chesnut CH, et al. J Bone Miner Res 2004;19:1241-9.

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### VITAMIN D STATUS IN PATIENTS TAKING BISPHOSPHONATE DRUGS IN PRIMARY AND SECONDARY CARE

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#### Introduction

Patients taking bisphosphonates for treatment and prevention of osteoporosis should be calcium and vitamin D replete. Undiagnosed vitamin D deficiency/insufficiency is common in older and chronically ill adults. Our aim was to assess the proportion of people taking bisphosphonates who also receive vitamin D supplements and to determine the vitamin D status of those not receiving vitamin D supplements.

#### Methods

Primary care (n=368) and Secondary care patients (n=164) taking bisphosphonates were recruited prospectively over 1 year. Those not receiving supplements provided blood for vitamin D levels. Vitamin D <30 nmol/l was defined as deficiency, 30-49 nmol/l as insufficiency.

#### Results

Primary care: 162 (44%) were on supplements. Of the rest, vitamin D levels were available for 93 subjects (82 female, mean age 71 years). 24 had deficiency, 25 had insufficiency. Therefore 49 (53%) had inadequate levels of vitamin D.

Secondary care: 52 (32%) were on supplements.

Vitamin D levels were available for 98 subjects (63 female, mean age 73 years) not taking supplements. 40 patients had deficiency, 37 insufficiency. Therefore, 79% had inadequate levels of vitamin D.

#### Conclusion

There are low levels of co-prescription of vitamin D with bisphosphonates. High rates of vitamin D deficiency/insufficiency exist in those not supplemented.

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**USING COMPUTER RECORDS TO IMPROVE SECONDARY PREVENTION OF OSTEOPOROTIC FRACTURES IN GENERAL PRACTICE - A CROSS-SECTIONAL STUDY**

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**Introduction**

National guidelines recommend bisphosphonates for secondary prevention of osteoporotic fractures; however poor adherence may result in sub-optimal prevention. This study reports the feasibility of using GP electronic records to identify poorly adherent post-menopausal women who may be at increased risk of fragility fractures.

**Methods**

MIQUEST software was used to extract prescription and diagnostic data from 28 practices in England (population ~200000). All women >45 years who received a first prescription for a weekly bisphosphonate (alendronate or risedronate) at least a year before data extraction, were identified. Each record was examined to determine the number of days of prescribed treatment and probable fragility fractures (hip, vertebral, wrist).

**Results**

Of 97992 registered women, 43.6% (42734) were >45 years; 3.1% (1314/42734, mean age = 74) received a prescription for a weekly bisphosphonate at least one year prior to data extraction (median duration of treatment, 230 days). 45.4% (597/1314) received prescriptions covering >288/360 days (Medicine Possession Ratio >80%); of these 28.6% (171/597) collected prescriptions covering >360 days. Prevalence of probable fragility fractures in all registered women was 5.1% (2195/42734); in those prescribed bisphosphonates, 22.8% (300/1314).

**Conclusions**

Women >45 years with probable fragility fractures are more likely to be prescribed bisphosphonates. Increasing bisphosphonate adherence should help improve secondary prevention in osteoporosis and GPs should use computer technology to prioritise poorly adherent patients who are unnecessarily at risk of fracture.

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**DOES THE GENDER AFFECT THE HAEMODYNAMIC RESPONSE TO TILT TABLE TEST IN PATIENTS WITH SYNCOPE?**

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**Introduction**

Vasovagal syncope was described more in younger women. When there is no apparent cause for syncope, tilt table testing may reveal a neurocardiogenic origin. This study was done to see if there is any different haemodynamic response to tilt testing between male and female patients presenting with syncope of unknown cause.

**Methods**

Retrospective study of 243 consecutive tilt table test results. Patients with syncope or presyncope were included. Patients whose tilt test was done for investigation of dizziness or falls were excluded. Pearson Chi square test was used.

**Results**

179 patients were included; 83 males (age range 16-93), and 96 females (age range 16-97). 47/179 patients (26%) had positive tilt table test result. Of those: 21/83 were male (25%), and 26/96 (27%) were female. There was no statistical significance between the two groups (P=0.787).

The positive response among male patients included 12/21 (57%) vasodepressor response, 6/21 (29%) cardioinhibitory, and 3/21 (14%) mixed response. However 13/26 female patients (50%) had vasodepressor response, 4/26 (15%) cardioinhibitory, and 9/26 (35%) mixed response. The difference between males and females was not statistically significant (P=0.392).

**Conclusion**

There was no difference in the proportion of positive tilt table response between male and female patients presenting with syncope of unknown cause. Males tend to have more cardioinhibitory response however there was no statistical difference in the type of neurocardiogenic syncope between male and female patients.

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**ASSISTANCE OR HINDRANCE:WHAT IS THE ROLE OF A DECISION MODEL IN ATRIAL FIBRILLATION?**

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**Introduction**

Managing complex decisions poses major challenges for clinicians as they require assimilation of extensive evidence and patient participation. Doctors often use heuristics ('rules of thumb') to help make complex decisions, but this can lead to suboptimal decision-making. This study examined the feasibility of a computerised decision model to assist clinicians' decision-making in clinical practice.

**Methods**

Fourteen doctors in cardiology and geriatrics examined clinical scenarios regarding antithrombotic therapy in atrial fibrillation (AF), and were asked to make treatment decisions before and after the use of a simple computerised model, constructed using requisite decision theory. Focussed interviews exploring attitudes about decision-making were undertaken. Decisions pre and post use of the model were compared, and qualitative content analysis undertaken.

**Results**

Following use of the decision model, up to 64% of respondents were willing to change prescribing behaviour for AF patients. Major themes on qualitative analysis showed that decision models were perceived as useful tools to provide definitive risk information for individual patients and help decision-making in complex scenarios. Clinicians still valued the importance of applying physician judgement, and other themes raised the impact on 'responsibility' for decision making, and accessibility of IT facilities.

**Conclusions**

In this study, the use of a computerised decision model was well received by clinicians as an aid to decision making in AF. Such tools could be developed to assist complex decision making in other areas of practice.

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**CAN DOCTORS AGREE ON TREATMENT CHOICES IN ATRIAL FIBRILLATION SCENARIOS?**

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**Introduction**

The National Institute for Clinical Excellence is developing guidance for the management of atrial fibrillation (AF) to highlight the importance of clinicians detecting and treating AF. Research has already shown that warfarin tends to be underused and that physicians over-estimate risks associated with warfarin.

**Methods**

Doctors in cardiology and geriatrics examined 5 clinical vignettes relating to AF and stroke prevention, and were asked to decide what antithrombotic treatment they would recommend. Vignettes included lone AF, recurrent falls and previous Intracerebral Haemorrhage (ICH), with stroke risks varying from 1.9%-18.2% per annum calculated using the CHADS score.

**Results**

Clinicians' agreement in the choice of antithrombotic treatment varied from 43-100%. 57% would prescribe antithrombotics for a patient with an 8.5% annual stroke risk and previous ICH, but only 14% would do so for a similar patient with a 12.5% annual stroke risk and previous ICH. Respondents were more fearful of prescribing warfarin to fallers than to patients with a previous ICH. Key themes on qualitative analysis revealed uncertainty and discomfort in choosing antithrombotic treatment in complex cases and an expressed lack of knowledge regarding stroke risks and bleeding risks with warfarin.

**Conclusions**

Clinicians exhibit marked variation regarding the choice of antithrombotic treatment in AF patients at risk of stroke due to individual perceptions of stroke and bleeding risks. Further research should concentrate on improving accessibility of risk information in AF to optimise everyday decision-making.

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AMIODARONE, SUNLIGHT AVOIDANCE AND VITAMIN D DEFICIENCY

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**Introduction**

Amiodarone accounts for 35% of antiarrhythmic prescriptions in Europe. It causes photosensitive skin reactions so it is recommended that people taking amiodarone should shield from sunlight.

The UK diet contains little Vitamin D. We are reliant on sunlight exposure and photosynthesis for 90-100% of our vitamin D.

We hypothesised that people who take amiodarone and avoid sunlight exposure were at increased risk of vitamin D deficiency.

**Method**

6 GP practices identified patients taking amiodarone (n=136; 76m, 60f: aged 38-97, mean 76). 84 patients consented to join the trial. They provided a serum sample and completed a questionnaire relating to sunlight exposure, medication, concurrent illnesses, falls and fracture rates. Samples were taken from July to September when vitamin D levels should peak.

We received 57 completed sets of data. Calcidiol levels above 50nmol/l were considered sufficient.

**Results**

49% of our population (aged 38-92, mean 68) were deficient in vitamin D. There was no correlation between levels and dose or years of amiodarone use. Although we identified a high rate of fractures (26%) and falls (35% in last year) we could not attribute this to length of amiodarone use or self reported sunlight exposure.

**Conclusion**

There is a high prevalence of vitamin D deficiency in people who take amiodarone. We ask physicians prescribing amiodarone to be aware of this and consider measuring levels of calcidiol and supplementing vitamin D.

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PREFERENCE OF OLDER IN-PATIENTS FOR CARDIOPULMONARY RESUSCITATION

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**Introduction**

Previous studies suggest male sex, younger age and greater functional ability are associated with preference for cardiopulmonary resuscitation (CPR). This study aimed to determine relationships between patients' opinions, clinical condition and CPR prognoses.

**Methodology**

Fifty consenting in-patients of age  $\geq 65$  years with Abbreviated Mental Test Score (AMTS)  $\geq 7$  were interviewed face-to-face two days pre-discharge from an urban teaching hospital about their knowledge of, preference to undergo, and estimate of survival from CPR. Data on their concurrent condition were collected from case records or with standardised assessment scales: AMTS, Barthel Index (BI), GDS-15, Cumulative Illness Rating Scale (CIRS), SF-12 Health Survey, Pre Arrest Morbidity (PAM) and Prognosis After Resuscitation (PAR) scores.

**Results**

CPR was wanted by 72% of patients. Using logistic regression analyses there was no significant associations between preference for CPR and age (mean 82 years), gender (52% women), place of residence (86% from own/rented home), ADL-dependency (median BI 15), cognitive function (median AMTS 8), mood, general health perception, co-morbidity and predictive scores for unsuccessful CPR. Patients' own estimate of survival chance was significantly associated with their preference for CPR ( $p < 0.001$ ); all 24 patients who offered an estimate of their survival chance opted for CPR, compared to 12 of 26 (46%) who did not.

**Conclusion**

Most elderly in-patients surviving to discharge opted for CPR. CPR prognoses and multi-dimensional assessments did not predict patients' preferences.

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**GLUCOSE TOLERANCE, MUSCLE STRENGTH AND IMPAIRED PHYSICAL FUNCTION IN OLDER PEOPLE: IS THERE A LINK?**

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**Introduction**

The objective of this study was to determine whether there is a relationship between glucose tolerance, muscle strength and physical function in men and women with and without type 2 diabetes.

**Methods**

A cross-sectional study within a cohort design was used to measure self-reported diabetic status, glucose and insulin levels 2 hours after an oral glucose tolerance test, muscle strength and physical function in a population based sample of 1391 men and women born 1931-1939.

**Results**

Diabetic status was associated with lower grip strength (41.8kg in diabetic men, 44.1kg in men with IGT and 44.7kg in men without either diagnosis,  $p=0.002$ ). In men without a previous diagnosis of diabetes, a standard deviation increase in glucose concentration was associated with reduced grip strength after adjustment for weight ( $b -0.97\text{kg } p<0.001$ ). Diabetic status, impaired glucose tolerance, and higher glucose levels with normal glucose tolerance, were associated with higher odds of poor physical function in the men. The relationships in women were weaker and not consistently statistically significant.

**Conclusions**

Our findings suggest a graded association between increased glucose level, weaker muscle strength and impaired physical function not only in older men with diabetes or impaired glucose tolerance, but also in those without either diagnosis. There may be implications for considering population based strategies to reduce glucose across the range in later life to improve physical function and independence for older people.

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**DEVELOPMENT OF THE HERTFORDSHIRE PHYSICAL ACTIVITY QUESTIONNAIRE (HPAQ) FOR OLDER PEOPLE: FEASIBILITY STUDY**

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**Introduction**

Physical activity is difficult to assess. Interviewer administered questionnaires are the most commonly used method but few have been designed specifically to include activities relevant to older people. Utilising participants in the Hertfordshire Cohort Study (HCS), we have developed a new self-administered physical activity questionnaire (HPAQ) based on the Minnesota instrument but adapted for use in later life. We report the findings of a feasibility study.

**Methods**

The HPAQ was offered at a HCS home interview to West Hertfordshire men and women. Those who agreed were left a questionnaire to complete after receiving written and verbal instructions from a research nurse. Participants were asked to return completed questionnaires to a clinic for checking by the research nurse.

**Results**

A target group of 559 people were approached to complete the HPAQ. A total of 525 questionnaires (94%) were returned from participants, mean age 67.9 years (range 63-72). Types of activities people were doing included walking for pleasure (84% of participants), lane swimming (12%), light/moderate effort exercises (27%) cultivating gardens (79%) and household cleaning (90%). Participants reported that they were able to complete the questionnaire with ease and that the questionnaire covered the full range of their activities.

**Conclusions**

The high response rate suggests that HPAQ is an acceptable questionnaire to older people and self-administration is feasible. Its validity now needs to be assessed.

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**OLDER PEOPLE'S INVOLVEMENT IN DECISION MAKING IN A FALLS CLINIC**

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**Introduction**

Involving patients in healthcare decisions improves treatment compliance and health outcomes. Literature suggests older people do not, or will not, engage in shared decision-making. Because treatment and prevention after a fall may itself be hazardous, decisions are complex. This study examines how older people engage in making these decisions.

**Methods**

We undertook semi-structured interviews with patients (n=26) from the Falls and Syncope Service, to elicit their understanding and experiences of, and engagement in, the decision making process.

**Results**

Many participants described health choices as ultimately being their own. Nonetheless the feeling that the 'doctor knows best' was a common theme. Most participants talked about older people being 'other' than themselves and were reluctant to conform to societies view of older people, which they considered to have connotations of dependence, debility and frailty. Participants described the importance of faith and confidence in their clinician, but wanted a relationship of mutual respect. Vulnerability was a major theme. This was experienced because of the unpredictability of their falls, general decline in health synonymous with advancing years, and in relation to isolation resulting from fear of further falls.

**Discussion**

Older people believe they should not be treated differently, nonetheless are influenced in decision making by extended life experiences, typically respect for authority, a sense of candidacy and increased vulnerability. Some older people choose not to engage in decision making, which is itself a choice.

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**PRELIMINARY RESULTS OF THE PLYMOUTH FALLS INTERVENTION STUDY: THE RELATIONSHIP OF SYNCOPE AND LIGHTEADEDNESS TO SIGNIFICANT CARDIOVASCULAR FINDINGS**

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**Introduction**

Symptoms of lightheadedness and syncope described by elderly fallers are used to identify those likely to have cardiovascular instability.

**Method**

320 patients, aged 65+ were randomised into intervention and control arms after presenting to general practitioners with a fall(s). Syncope and lightheadedness were noted. Intervention included multidisciplinary evaluation with 7 day event monitoring in all patients, postural blood pressure with phasic monitoring and carotid sinus massage.

**Results**

The findings are presented on 155 intervention patients.  
22 patients (14%) admitted to syncope, 55 patients (35%) to lightheadedness.  
83 patients (54%) overall had positive cardiovascular findings with 23 patients (15%) having an indication for pacing.  
51 patients (51%) denying lightheadedness had a positive test (11 patients (16%) requiring pacemakers), compared to 30 patients (55%) of those admitting to this symptom.  
67 patients (50%) denying syncope had a positive test (11 patients (22%) requiring pacemakers), compared to 15 patients (68%) of those admitting to syncope.  
13 of the 23 patients with an indication for pacing denied both symptoms.

**Conclusions**

Lightheadedness has been reported as a useful discriminatory symptom for identifying cardiovascular instability as a cause of recurrent falls. In our group this was not demonstrated.  
Syncope is a more useful marker for cardiovascular instability. However our study demonstrates a significant incidence of cardiovascular problems in elderly community based fallers who do not describe syncope or lightheadedness during assessment of their falls.

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**GAIT AND DISABILITY AS PREDICTORS OF LENGTH OF HOSPITAL STAY IN OLDER PATIENTS**

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**Introduction**

Recent studies suggest that gait speed is a good predictor of disability and hospitalization. This study examined the predictive power of gait and other health-related variables on duration of hospital stay.

**Methods**

The gait of 141 older patients with acute illness admitted to an acute care facility was examined at admission (mean age 75.8 years, 55% female). Gait function and stability was assessed with a portable monitoring system that collects information on gait cycle timing and its sub-phases. Gait function was assessed at discharge where possible (n=58). Baseline characteristics of patient health and other measures of gait and balance were recorded (e.g. age, gender, medications, pain, Barthel Index, MMSE, depression, comorbidity, functional reach and assistive device use).

**Results**

In univariate analysis, gait speed ( $r=-0.32, p<0.001$ ), stride time variability ( $r=0.20, p=0.032$ ) and swing time variability ( $r=0.27, p=0.003$ ) were associated with duration of hospital stay. In multivariate analysis that controlled for the other baseline health, gait and balance-related variables, the only independent predictor of hospital stay was Barthel index (Beta=-0.783,  $p=0.045$ ).

**Conclusions**

A reduced Barthel index was the only independent predictor of prolonged length of hospital stay in this study. This measure of disability at admission may be useful in predicting duration of hospital stay. Gait measures, though useful as a predictor of disability and hospitalisation, appear not to be useful in determining length of stay in older patients admitted to an acute care facility.

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WITHDRAWN

WITHDRAWN

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REDUCING IN-PATIENT FALLS

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**Introduction**

Slips, trips or falls are the most frequent critical incident reported in our Trust (71%). To date effective interventions to reduce inpatient falls are limited. NICE falls guidelines recommend training and education as a means of reducing falls.

**Methods**

A process of education and awareness raising with staff of all disciplines and empowering patients within the ward environment was introduced on 2 care of the elderly wards within our Trust. A third comparable ward acted as a control. The process included prominent positioning of 'Falls risk' cards, coupled with patient involvement by verbal and written patient information.

**Results**

Critical incident reporting for slips, trips and falls were compared in the period Sept 03-March 04 (before 'raising awareness programme') and Sept 04- March 05 (after). The three COE wards although comparable in case mix had slightly differing bed numbers, therefore incidents were reported as per bed during the 7 month period. On the two intervention wards inpatient falls per bed reduced from ward A: 3.12 to 2.24 and ward B 2.06 to 1.64 whilst on the control ward there was an increase from 2.05 to 2.23.

**Conclusion**

In-patient falls have cost implications to the Trust and devastating consequences for patients. Raising awareness and empowering patients by involving them in this process has the potential to reduce falls by 25 to 30% in clinical areas.

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WITHDRAWN

WITHDRAWN

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### IMPLEMENTATION OF AN EVIDENCE-BASED APPROACH TO PREVENTING FALLS IN A HIGH-RISK POPULATION

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#### Introduction

Published evidence supporting strength and balance training in the prevention of falls has concentrated on either group or home-based exercise without offering choice to maximise adherence. The Physiological Profile Assessment (PPA) is a validated tool for quantifying falls risk based on five physiological measures - contrast sensitivity, knee extension strength, proprioception, reaction time and postural sway.

**Hypothesis:** Targeted interventions in a high-risk population result in statistically significant improvements in PPA scores irrespective of delivery setting.

#### Method

**Participants:** 50 consecutive falls clinic patients with a Timed-Up-And-Go >15 seconds who consequently underwent a PPA.

**Procedure:** Patients with impairments in muscle strength, reaction times or postural sway were offered evidence-based strength and balance training. Exercise setting was decided based on patients' characteristics and choice.

**Measurement:** Baseline and 6 month follow-up PPAs were compared using paired t-tests.

#### Results

The mean age of patients was 77, 72% were female. Mean baseline PPA score was 2.23 indicative of marked falls risk. Mean PPA scores significantly improved at 6-month follow-up to 1.64 ( $p < 0.001$ ). There were significant improvements in knee extension strength ( $p = 0.001$ ), reaction times ( $p < 0.001$ ) postural sway ( $p < 0.02$ ) and proprioception ( $p < 0.05$ ), but not vision ( $p = 0.4$ ). Improvements in PPA scores were statistically significant for both home and group exercisers.

#### Conclusions

Targeted exercise delivered in a setting dependent on patients' choice and characteristics resulted in improved PPA scores in this population after 6 months.

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### RESPONSES TO PERTURBATIONS OF GAIT WHILE WALKING ON A TREADMILL IN OLDER FEMALES AFTER A FALLS PREVENTION PROGRAMME

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#### Introduction

Fit older subjects more frequently use a less stable recovery strategy after perturbations of treadmill walking than young subjects (Bruce et al, 2000). We now compare recovery strategies in frailer older women.

#### Methods

Kinematic sequences were recorded by CODA motion analysis, during treadmill walking, from 24 women, mean age 74.2 (sd 3.4) years, who had fallen at least once in the previous four years and had participated in exercise to improve balance and gait. CODA also triggered perturbations, insufficient for loss of balance, at the beginning of swing phase during randomly selected strides. RNOHT ethical committee gave approval; subjects gave written informed consent.

#### Results

"Fallers" ( $n = 16$ ) had still fallen at least once in the previous year, "non-fallers" ( $n = 8$ ) had not. Heel-strikes and toe-offs were generally advanced immediately following perturbation compared with unperturbed strides (18/19 records from "non-fallers" vs 30/44 "fallers"). Analysing these advanced records, "fallers" took longer to return to their normal pattern after perturbation ( $p < 0.05$ , unpaired t-test). Both groups showed approximately 2° increases in trunk flexion following perturbation, which lasted approximately 0.25 seconds longer in "fallers", who then slightly overcompensated ( $p < 0.01$ , unpaired t-test).

#### Conclusion

Analysis of gait pattern after minor perturbations detects differences between older women who had reduced numbers of falls after a falls prevention programme and those who did not.

Bruce SA, et al (2000) *JPhysiol*, 525.P, 46P

Dunhill Medical Trust and Tana Trust gave generous support

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IMPROVEMENT OF MOBILITY TESTS AFTER DRUGS MODIFICATION IN OLDER FALLERS

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**Introduction**

Multi-factorial assessment plus multi-component intervention has been shown to be an effective tool for prevention of (further) falls. But for individual interventions, with the exception of mobility training, effect (size) is still unclear. We performed a prospective cohort study, in which we measured the effect of modification (cessation or dose-reduction) of fall-risk increasing drugs (FRID) on mobility tests.

**Methods**

Baseline testing was performed in 211 newly referred patients; testing was repeated in a subgroup (n=142) at 3 months; 139 patients were fallers; within this group FRID-modification was possible in 71.

Testing included 10m Walking Test (10m-WT), Timed Up and Go Test (TUGT), Functional Reach (FR), measurement of isometric strength of M.Quadriceps (microFET) and body sway. Differences between first and second test results were analysed using a paired T-test.

**Results**

Mean age 77.5 years (76.7-78.3), 65.4% female. Mean number of FRID 2.8 (2.5-3.1). In the FRID-modification group (n=65) 10m-WT and TUGT improved (p<0.05); no significant difference in FR, microFET and body sway. In the subgroup of fallers without FRID-modification 10m-WT, TUGT and FR deteriorated (p<0.05); no significant difference in microFET and body sway. In the subgroup of non-fallers 10m-WT, TUGT, FR and microFET deteriorated (p<0.05); no significant difference in body sway.

**Conclusion**

FRID-modification as a single intervention improves expected changes over time in 10m-WT, TUGT and FR, and may well be an effective tool for improving balance and reducing falls.

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FACTORS ASSOCIATED WITH FALLS EFFICACY SCALE (FES) IN ACUTELY ILL OLDER PATIENTS

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**Introduction**

Fear of falling has been associated with functional decline, poorer health status and reduced mobility. The falls efficacy scale(FES) is a validated tool for evaluating a person's perception of their abilities to perform ADLs as well as their fear of falling. We sought to determine independent predictors of FES and therefore identify potentially modifiable factors to improve the confidence and mobility of the older population.

**Methods**

FES scores were determined in 141 older patients with acute illness admitted to an acute care facility(mean age 75.8 years, 55% female). Baseline characteristics of patient health, functional ability and measures of gait and balance were recorded at admission and at discharge where possible(n=58).

**Results**

Using multivariate analysis that adjusted for age, gender, BMI, medication use, comorbidity, assistive device use, MMSE, depression, and stride and swing variability, FES was found to be independently predicted by Barthel index (Beta=0.52,p=0.015), leg pain (Beta=0.39,p=0.033), functional reach (Beta=-0.37,p=0.026), pre-discharge velocity (Beta=0.62,p=0.033), average stride time interval at baseline (Beta=-1.02,p=0.025) and at discharge (Beta=1.05,p=0.026).

**Conclusions**

A number of factors influence fear of falling in the older population including gait related variables and the Barthel Index. Interventions designed to reduce fear of falling should focus on identifying and targeting these potentially modifiable factors following admission. A reduction in fear of falling and associated activity restriction in older persons may result in an improvement in their overall health status.

## REFLUX RISING! A DISEASE IN EVOLUTION?

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*Rotherham General Hospital, S60 2UD***Introduction**

Gastroesophageal reflux disease (GERD) is thought to be seen more frequently yet firm evidence is sparse. We examined our data for changes in incidence and demographic profile.

**Methodology**

Detailed prospective records have been kept of all patients with upper gastrointestinal disease since 1977. Definition Erosive esophagitis (EE) = endoscopy-verified erosive changes. Non-erosive reflux (NER) = heartburn +/- regurgitation but normal endoscopy. GERD = EE+GER i.e. total.

**Results**

**Presentation** 1977-81 82-86 87-91 92-96 97-2001\*

**Newly diagnosed patients (n)** *Marked increase*

GERD	714	1586	2381	3812	3880
EE	480	868	1077	1645	2211
NER	259	767	1379	2222	1669

**Mean age (years)** *Older, Age rising disproportionately*

GERD	48.0	50.5	52.3	53.1	53.5
EE	49.5	53.9	57.2	56.0	54.9
NER	45.0	47.0	48.3	51.0	51.7

General

Population	35.4	36.3	37.1	37.7	38.4
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**Elderly (% ≥ 65y)** *Increasing proportion of elderly*

GERD	18.9	23.0	28.0	28.0	27.0
EE	21.9	32.5	39.2	36.4	30.5
NER	12.0	10.2	18.4	22.1	22.0

General

population	12.3	12.9	14.3	14.9	15.6
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**Haemorrhage (% of EE)** *Rising*

All ages	5.2	8.6	11.4	11.0	6.3
Elderly	7.6	13.8	15.0	16.0	10.6

**Stricture (% of EE)** *Uncommon in the young*

All ages	4.2	5.0	5.1	2.7	4.8
Elderly	13.3	12.4	8.6	4.3	10.7

**Male: Female ratio** *More women*

GERD	0.4	0.7	0.8	1.0	0.8
EE	0.3	0.5	0.6	0.7	0.6
NER	0.6	1.0	1.0	1.3	1.3

\* Numbers affected by administrative changes introduced around 1997

**Conclusion**

The increase in GERD cannot be accounted for by greater awareness or misclassification: the diagnosis of EE is based on objective evidence; and the demographic profile is changing. The dramatic 5-fold increase in GERD incidence is a new phenomenon, an example of a disease in evolution.

## COMPARISON OF TRAINERS' AND TRAINEES' PERCEPTIONS OF TRAINING QUALITY

S BRIGGS, E FIELDING, S MCCrackEN, O OTAIKU, A THOMSON AND P BAKER

*Geriatric Medicine SpR Training Program, North Western Deanery***Introduction**

Most medical training in the United Kingdom is in the context of service. Quality control methods include site visits and feedback from training providers and consumers. Little is known about the effectiveness of these strategies. We compared the perceptions of trainers and trainees regarding training quality for Specialist Registrars in Geriatric Medicine in our region.

**Methods**

11 core areas of the Royal College of Physicians curriculum for Geriatric Medicine were graded from A (highest) to D, separately by trainees and lead trainers from each hospital. We described agreement between ratings and quantified this for each topic separately using the kappa statistic.

**Results**

Paired data was available from 15 sites. Ratings for the region's training overall showed good agreement between trainers and trainees - grade A 5% v 2%, B 33% v 33%, C 39% v 39% and D 23% v 26%. For individual departments there was complete agreement in 41%, difference by one grade in 50% and by two grades in 9%.

**Conclusions**

There was good agreement between trainers and trainees overall. Given objective criteria to work by, most providers and consumers give a similar judgement. More work is needed on refining grading criteria and education in their application. This may have implications for the usual technique of site visits, which could concentrate less on information gathering and more on formulating action.

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### JUNIOR DOCTORS' ATTITUDES TOWARDS GERIATRIC MEDICINE

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#### Introduction

Geriatric medicine is an expanding specialty to serve an ageing population. Generating interest in Geriatric medicine is essential to promote and maintain recruitment to the specialty.

#### Methodology

We have undertaken a study to assess junior doctors' attitudes towards Geriatric medicine as a choice of career. Senior house officers/foundation programme year two doctors in medicine from three local hospitals were sent an anonymous questionnaire.

#### Results

65 doctors responded. 42% (27/65) were in their first year posts and 40% (26/65) in second year. 28% (18/65) were doctors in geriatric medicine posts. With regards to intended careers, 2/65 respondents chose Geriatric medicine as their first career choice, with a further 3/65 considering it as second choice. 15/65 had not fully decided their intended careers. 29% (19/65) would consider geriatrics as a career whilst 51% (33/65) would not. Main positive aspects for choosing geriatric medicine included: variety (60%), multiple problems (48%), enjoyed past/present experience (45%), multidisciplinary team work (34%), holistic approach (31%), 'geriatric giant' problems (20%) and social problems (17%). Main negative aspects of geriatric medicine included: social problems (54%), 'geriatric giant' problems (31%), multidisciplinary team work (15%), dislike of past experience (11%).

#### Conclusion

Variety, multiple problems and enjoyment of geriatric attachment appear to be the main attractions whereas social problems and 'geriatric giant' problems deter some. Over a quarter of respondents would consider geriatrics as a career. Local, regional and national efforts should be made to support and encourage a career in Geriatric medicine. This study provides some insight into junior doctors' reasons for choosing geriatrics and provides some areas to help target recruitment.

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### JUNIOR DOCTORS' UNDERGRADUATE AND POSTGRADUATE EXPOSURE TO GERIATRIC MEDICINE

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#### Introduction

Emphasis on the issues of older people at both undergraduate and postgraduate level is favourable to help improve knowledge and understanding of the complexity of Geriatric Medicine.

#### Methodology

Senior house officers (SHO) and foundation programme year 2 (FPY2) in medicine from two district general hospitals and one teaching hospital (all within the area of one medical school) were sent an anonymous questionnaire. The questionnaire was structured to determine their exposure to geriatrics at different levels and how much they enjoyed the experience.

#### Results

65 doctors responded (25 male, 39 female and 1 unknown). 78% (51/65) were exposed to geriatrics as an undergraduate. 6% (3/51) found the experience excellent, 45% (23/51) good, 33% (17/51) average, 6% (3/51) poor and 4% (2/51) very poor. 68% (44/65) had experienced geriatrics as a pre-registration house officer. 18% (8/44) found the experience excellent, 20% (9/44) good, 50% (22/44) average and 5% (2/44) poor. Most SHO/FPY2, 82% (53/65), had posts in geriatrics. 21% (11/53) found the experience excellent, 45% (24/53) good, 25% (13/53) average, 4% (2/53) poor and 6% (3/53) very poor.

#### Conclusion

Over 1/5th of doctors surveyed had not been exposed to geriatrics (or could not recall the experience!) as an undergraduate. 68% had experienced geriatrics at house officer level. Over three-quarters of doctors surveyed had exposure to geriatric medicine at senior house officer/FPY2 level, of which 66% found the experience at least good. Enhanced knowledge of geriatric medicine at all levels is desirable to promote care of older people.

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### THE COSTS OF FALLS IN THE COMMUNITY FOR THE NORTH EAST AMBULANCE SERVICE

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#### Introduction

The cost of community falls in older people to agencies outside the NHS is unclear. We quantified the immediate costs of fallers coming to the attention of the North East Ambulance Service (NEAS).

#### Methods

Prospective NEAS data was collated from Newcastle to identify all those over 65 who had fallen and required: 1) assistance only call, 2) transportation to the one A&E department in the city. 2001 census data for Newcastle was obtained.

#### Results

Total Newcastle population over the age of 65 was 41338. Over 7 months NEAS attended to 1504 falls in Newcastle (at £115 per call out this equates to £172,960). NEAS took the faller to A&E 1339 occasions whilst 165 falls required assistance only (11% of total) (36 falls coming to NEAS attention per 1000 Newcastle population over 65 in 7 months). Time on site attending to fallers in Newcastle was 377.1 hours (15.7 days in 7 months or 2.25 days per month). Cost per hour of crew time is £123/hour equating to total cost of £46,383.30. Total costs for NEAS attending fallers in the community is £376,017.08/year (£145.83 per fall or £9.10 per person over 65 in Newcastle per year).

#### Conclusion

NEAS attend to a significant number of older people who fall in the community. Costs of this service in Newcastle alone equate to over 2 days of emergency crew time per month.

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### FEASIBILITY AND CONTENT OF A GERIATRIC INTERMEDIATE CARE PROGRAMME

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#### Introduction

This study evaluates the feasibility of the Dutch Geriatric Intermediate care Programme (DGIP). The DGIP is a multidisciplinary model of care where nurse, GP and geriatrician share responsibility for geriatric assessment and management of care. A health problem must be presented to the GP and has to be related to one of seven defined major geriatric syndromes. The objective of this study is to examine the feasibility and content of the DGIP.

#### Methods

Besides patients (n=54) and carers (n=37), GPs (n=15), geriatricians (n=2) and nurses (n=6) participated in the performance of the study. Primary outcome measure were the experiences of all participants with regard to the results and the process of the intervention, which we explored by semi-structured interviews and a questionnaire. The content of the intervention has been explored by analysis of patient records.

#### Results

54 frail patients were included with a mean age of 84 years old. Most patients were referred by the GP to the DGIP for health problems in cognition (n=22), mood (n=13) and mobility (n=11). The nursing interventions that were performed can be divided into five categories: problem analysis (n=153), advises (n=133), education (n=12), co-ordination of care (n=60) and other (n=21).

#### Conclusion

The implementation of this intervention is feasible. The specific health related requests of GPs often had a multiple character. Problem analyses, advises and co-ordination of care were the most commonly performed interventions.

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### DOES ADMISSION GRIP STRENGTH PREDICT LENGTH OF STAY IN HOSPITALISED OLDER PATIENTS?

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#### Introduction

Epidemiological studies have shown that grip strength measured in middle-aged and older people is a powerful predictor of functional decline, disability and mortality but it is rarely utilised in the clinical setting. The aim of this study was to investigate whether admission grip strength predicted length of stay in hospitalised older patients in an acute medical setting.

#### Methods

120 patients over 75 years were recruited within 48 hours of admission. A single investigator measured grip strength and collected information on age, gender, co-morbidity, medication and MUST, Barthel and MACME scores. Length of stay and place of discharge were later abstracted from the records. Survival analysis was used to investigate the relationship between grip and length of stay.

#### Results

The average age was 84.4 years (range 75 - 101 years). Average grip strength for the men was 29.5kg and women 16.8kg. Higher grip strength was associated with an increased likelihood of discharge home after allowing for gender (HR 1.03 per kg grip strength,  $p=0.05$ ). Grip strength was strongly associated with nutritional and functional status, which also predicted length of stay.

#### Conclusion

This small clinical study provides preliminary evidence that admission grip strength may predict length of stay in hospitalised older people. The association between grip strength, nutritional status and functional status may explain this finding. Measurement of grip strength may be useful in clinical practice and this work warrants replication.

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### PEOPLE WHO CALL AN AMBULANCE AFTER A FALL WHO ARE NOT TAKEN TO HOSPITAL: AN OPPORTUNITY TO INTERVENE?

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#### Introduction

Some people, who fall, call an ambulance and are not taken to hospital. They may be a group in whom intervention could be targeted.

#### Method

Telephone calls (categorized as either A, B, C (response 9, 19 or 120 minutes)) following a fall, from people over 60 years to the East Midlands Ambulance within four PCTs (total population =125,522), were logged over ten weeks. Deprivation scores for PCTs (DI) taken from national statistics.

#### Results

1177 people, 60 years of age and older, fell and called an ambulance, of whom 409 (33%) were not transported. The rate of falls per 1000 residents >60 varied by PCT: City 11.8, Broxtowe and Hucknall 8.4, Gedling 8.1, Rushcliffe 6.9.

	Not transported n = 409	Transported n = 768	Comparison
Age (median)	76	82	$p < 0.001$
Male (%)	178 (43%)	305 (40%)	$p=0.20$
Category			
A	23	99	$p < 0.001$
B	247	470	
C	139	199	
City (DI 44.8)	203	373	$p = 0.070$
B&H (DI 20.1)	76	170	
Gedling (DI 18.5)	83	117	
Rushcliffe (DI 9.3)	47	108	

#### Conclusion

The number of people per week who fall and are not transported to hospital is sufficient to consider providing a service to prevent further falls. These fallers are most likely to have elicited a non-urgent, Category C, response, but are no more likely to live in a deprived area.

**A DESCRIPTION OF THE HEALTHCARE PROVISION RECEIVED BY WOMEN WITH URINARY INCONTINENCE (UI) SEEKING HELP FOR THEIR SYMPTOMS IN THE UK AND REPUBLIC OF IRELAND**

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**Introduction**

Few studies have described treatment received by patients with urinary incontinence (UI) although associated with substantial levels of unmet need. Governmental guidance has identified variations in services as a problem.

**Method**

1070/1076 women were analysed. The distribution of UI subtypes was 25.4% (233) stress UI, 16.0% (147) urge and 58.7% (539) mixed.

**Results**

	Percentage of patients using resource item			Mean cost per patient		
	Pure SUI	Mixed	Pure UII	Pure SUI	Mixed	Pure UII
Medication	25.9%	42.1%	54.8%	£34.8	£64.1	£95.0
Original Surgery	1.3%	1.5%	3.4%	0.0	£24.7	£80.1
Pads	83.7%	89.1%	78.2%	£50.8	£102.6	£41.8
Any Conservative Treatment	45.5%	48.1%	40.8%	£36.7	£20.0	£32.1
Any Pelvic Floor Exercises (PFEs)	43.3%	44.6%	35.4%	-	-	-
Any Vaginal Cones	0.4%	1.7%	0	-	-	-
Electrical Stimulation	1.3%	1.1%	2.7%	-	-	-
Bladder Training/Diary	3.5%	5.4%	8.2%	-	-	-
Lifestyle Changes	6.1%	9.5%	11.6%	-	-	-

**Discussion**

Rates of surgery and clinic administered PFEs were low and be explained by access difficulties. Waits to see a specialist were 10.9 and 11.3 weeks. Waits to receive surgery were on average 19.8-39.6 weeks. The average wait to see a physiotherapist was 6.8 weeks. Rates of original surgery were low - 11.6% (SUI), 16.1% (MUI) and 21.8% (UII). A high percentage of patients used pads. Only 36.8% of women had their products paid for by the NHS.

**THE RELATIONSHIP BETWEEN QUALITY OF LIFE AND PHYSICAL HEALTH WHEN MAKING DO-NOT-RESUSCITATE DECISIONS**

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**Introduction**

Published guidelines suggest that patients with poor quality of life can be excluded from cardiopulmonary resuscitation (CPR). Whilst do-not-resuscitate (DNR) decisions using physical criteria are difficult, subjective assessments such as quality of life are even more complex. Our aim was to see if a relationship between quality of life and physical health pre-cardiac arrest exists.

**Methodology**

The physical health of 100 consecutive medical in-patients was measured using the Prognosis After Resuscitation (PAR) score. From published data we calculated the probability of surviving CPR as 2.2% for PAR>8 and 10.7% for PAR ≤8. Health-related quality of life was measured using the Short Form-36 (SF-36) questionnaire. Importantly, our physicians do not use PAR or SF-36 scores when making DNR decisions.

**Results**

The median patient age was 83 years. 83 patients were 'for CPR' and 17 DNR, median PAR scores 5.0 and 12.0 respectively (p<0.01). In all nine SF-36 domains, scores were worse in patients with PAR>8 and those with DNR decisions, being statistically significant (p<0.05) in six domains. DNR orders were present in 2 patients PAR ≤8 and 15 patients PAR>8 (p<0.01).

**Conclusion**

Physically sick patients, with a reduced probability of surviving CPR, also have reduced health-related quality of life. Whilst we know that DNR decisions in our study were actually based predominantly upon physical factors, our physicians' DNR decisions also reflect patients with reduced health-related quality of life.

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**KNOWLEDGE OF OLDER IN-PATIENTS  
ABOUT CARDIOPULMONARY  
RESUSCITATION PRIOR TO HOSPITAL  
DISCHARGE**

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**Introduction**

Current good clinical practice encourages participation of patients, when feasible, in discussion about cardiopulmonary resuscitation (CPR) and 'do not attempt resuscitation' (DNAR) decisions. But what do our patients know about these issues?

**Methodology**

Fifty in-patients age > 65 years with Abbreviated Mental Test Score (AMTS) >7 were interviewed face-to-face two days pre-discharge from an urban teaching hospital, after obtaining their informed consent. The semi-structured interview explored their knowledge of the CPR procedure, - their preference for it and their own estimate of survival following CPR. Data on their concurrent condition were collected from case records or using standardised assessment scales (AMTS, Barthel Index, GDS-15, Cumulative Illness Rating Scale (CIRS), SF-12 Health Survey, PAM and PAR scores).

**Results**

Two-thirds of the participants had no knowledge of CPR: they were unable to express an understanding of the procedure when interviewed. Age, gender, place of residence and SF-12 had no significant association with patient's knowledge of CPR. Barthel Index, AMTS, GDS-15 and CIRS severity index were significantly associated ( $p < 0.05$ ) with patient's knowledge of CPR in multiple logistic regression analysis. Only 20% of participants knew that anticipatory DNAR decision could be made. CIRS score was significantly associated with anticipatory DNAR decisions taken by doctors ( $p < 0.05$ ).

**Conclusion**

Most patients had no knowledge of CPR. However knowledge of CPR was found to be dependent on patient's functional dependency, cognition, mood and burden of illness.

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**FACTORS AFFECTING PHYSICIANS'  
DECISIONS TO WITHHOLD LIFE  
PROLONGING TREATMENTS IN  
TERMINAL CARE IN THE UK**

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**Introduction**

The aim of the study was to examine the variability between physicians in making end of life decisions in relation to their age, grade and speciality, and to examine the influences of family's wishes and advance directives.

**Methods**

A web based questionnaire consisting of three case vignettes, each based on the same unconscious terminally ill cancer patient, the first with no information regarding patient's wishes (Q1), secondly with additional information from family members requesting that everything should be done (Q2) and thirdly from an advance directive requesting that all treatments be withdrawn if no hope of recovery (Q3). Physicians were asked how likely they were to withhold 10 treatments.

**Results**

90 replies

Treatment most likely to be withheld was ventilation (80%), and least likely to be withheld was oxygen therapy (17.8%). In Q2 fewer treatments were withheld, although only significant with the antibiotic treatment ( $p < 0.05$ ). In Q3 more treatments were withheld, significantly with antibiotics, plural drainage, laboratory investigations, intra-venous hydration and oxygen therapy ( $p < 0.05$ ). Consultants were more likely to withhold antibiotics (63.4%v36.7%,  $p < 0.05$ ) and laboratory investigations (61%v40.8%,  $p < 0.05$ ) compared to junior doctors in Q1. Junior doctors were more likely to withhold naso-gastric feeding compared to Consultants (73.5%v48.8%,  $p < 0.05$ ). GPs were more likely to withhold antibiotics (71.4%v39.2%,  $p < 0.05$ ) and oxygen therapy (32.1%v11.8%,  $p < 0.05$ ) compared to hospital doctors in Q1.

**Conclusions**

There is great variation in physicians' decisions to withhold treatments in terminal care patients.

### WHAT MAKES A GOOD CARDIO-PULMONARY RESUSCITATION FORM?

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#### Introduction

The NSF for older people advocates patient-centred care, "enabling them to make choices about their own care". National CPR guidelines state information should be available for patients and those close to them, and that decisions must be communicated effectively. We aimed to determine the availability and merits of forms enabling patients to state their end-of-life healthcare wishes in NHS Trusts.

#### Method

Anonymous postal questionnaire survey of all UK BGS members.

#### Results

59% (842/1426) of questionnaires were returned. Only 27% (214/784) of geriatricians were aware that their Trust had a form to help patients record their healthcare wishes. For almost all, this form only addressed CPR (95% (204/214)). 10 geriatricians (5%) worked in Trusts with forms that addressed multiple healthcare issues. Features geriatricians associated with good forms addressing CPR were:

- ◆ simple, clear document
- ◆ easily found by virtue of its colour or because it was filed in a specific section
- ◆ provided completion information for medical staff and instructions on mental capacity assessment
- ◆ provided information for patients/relatives
- ◆ encouraged discussion with patient/relatives and multidisciplinary team
- ◆ requested the reason for the decision
- ◆ a planned review date mandatory
- ◆ additional freehand comments section

#### Conclusion

Only a quarter of geriatricians were aware their Trust had any form to help patients record their end-of-life wishes, almost all only referred to CPR. The merits of these CPR forms inform others wishing to write similar literature for their Trusts.

### DEMENTIA IN FRAIL ELDERLY PATIENTS IS INDEPENDENTLY ASSOCIATED WITH GAIT SPEED AND GAIT VARIABILITY

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#### Introduction

Gait disorders and dementia are prevalent in elderly people and associated with falls and loss of independence. In patients without severe co-morbidity dementia is associated with a slower gait velocity and higher variability in stride length and stride time. We studied whether this association is still present in frail elderly patients with dementia.

#### Methodology

Frail elderly inpatients with and without dementia were included. Quantitative gait analysis was performed with an electronic walkway (Gaitrite®). Patients walked twice at comfortable speed and twice with a dual task. We compared gait variables and their variability measures (coefficient of variation: CV) between demented and nondemented patients.

#### Results

125 patients (age 77.3, SD 7.4, 72 female) participated. 63 had mild to moderately severe dementia. Walking velocity in demented vs non-demented group was 0.58 vs 0.65 m/s; CV stride length 9 vs 5.8%; CV stride time 15.5 vs 5.6%. Dual tasking significantly decreased gait velocity and increased variability.

A multiple regression model (factors: dementia, parkinsonism, walking aid, ADL functioning, fear of falling) explained 45-50% of variance in gait speed and variability. Dementia and ADL functioning had a synergistic effect on gait ( $p=0.02$ ).

#### Conclusion

In frail elderly patients the association between dementia and gait velocity and increased gait variability is still present. As far as we know, the clinically relevant interaction of dementia and ADL on gait was not shown before.

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**CASCADE OF LEVODOPA DOSE AND WEIGHT-LOSS-RELATED DYSKINESIA IN PARKINSON'S DISEASE (LD-WD-PD CASCADE)**

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**Introduction**

The factors known to lead to dyskinesia in Parkinson's disease are the disease duration and levodopa dose. We have retrospectively studied the possible additional factors for the risk of developing dyskinesia.

**Methods**

A cohort of PD patients was assessed at initial presentation and periodically for body weight in addition to the development of new dyskinesia.

Results: Twenty-nine of the 220 patients developed new dyskinesia at the second assessment. The dyskinetic patients received significantly higher maximum level daily dose of levodopa, they lost weight during the course of the disease from  $76\pm 15$  kg to  $66\pm 17$  kg  $p=0.002$  and received significantly higher daily dose of levodopa per kilogram body weight,  $8.4\pm 3.5$  mg/kg vs.  $6.0\pm 3.9$  mg,  $p=0.003$ . There was a "dose response to developing dyskinesia". Weight-loser patients, particularly the females, with higher weight loss developed more dyskinesia; logistic regression analysis revealed percentage weight loss ( $p<0.001$ ) and daily levodopa dose per kilogram body weight ( $p=0.008$ ) to be the only significant factors for dyskinesia; disease duration, absolute levodopa dose, gender and weight were not significant. Non-weight losers were at a much lower risk of dyskinesia- 5% vs 21%,  $p=0.002$ .

**Conclusion**

A subset of PD patients are weight losers, they receive higher levodopa dose per kilogram body weight and develop dyskinesia. Levodopa dose should be adjusted according to their weight during the course of the disease.

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**ISAACS' SIGN : TISSUE HOLDING IN ELDERLY INPATIENTS**

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**Introduction**

The clutching of a tissue or handkerchief is often seen in elderly inpatients. Professor Bernard Isaacs regarded this behaviour as a poor prognostic sign with regard to rehabilitation. As there is no published literature on this topic, we have investigated who holds tissues and why.

**Methodology**

We carried out a point prevalence study on all geriatric wards in Leeds. Using a standard proforma, we visited each ward within a two week period, collecting data on patient numbers, age, sex, and the reason given for holding a tissue.

**Results**

A total of 377 patients were surveyed. We found that 10.1% (38) of elderly care inpatients were holding a tissue or other item. 84% were women. 50% gave a physical explanation for holding a tissue -nasal, oral or eye symptoms, cough, sweating and vomiting. However we were only able to confirm the explanation objectively in 28%. Many said that they held a tissue out of habit. Some said that they had no pockets for their handkerchiefs, and others were unable to give a reason.

**Conclusion**

Tissue holding is common in elderly inpatients, especially amongst women. Patients offer many reasons for tissue holding but there is often no objective cause for it. We now plan to investigate the psychological and prognostic aspects of this behaviour.

## HAEMOGLOBIN AND ERYTHROPOETIN RESPONSE IN AGEING AND FRAILTY

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**Introduction**

The pathophysiology of frailty is unknown. Haemoglobin (Hb) falls with age and reduced erythropoietin (EPO) secretion is thought to contribute to this process. Recent studies in older people have shown that even within WHO defined normal range, lower Hbs are associated with reduced function and increased mortality. This raises the possibility of abnormalities in erythropoiesis being part of the frailty syndrome.

**Methods**

3 groups of patients aged 75 or over were recruited: 30 patients receiving Continuing Care in hospital, 40 patients referred to Day Hospital for rehabilitation (DH) and 40 community-dwelling age-matched controls (INDEP). The fourth group comprised 30 young controls.

**Results**

There was a significant decrease in Hb with advancing age and increasing frailty with a parallel increase in EPO level.

Within Hb levels considered by WHO criteria as normal, older patients had significantly higher mean EPO levels (16.64 vs. 12.07 mU/ml), associated with lower Hb levels (13.82 vs 14.48 g/dl).

	Young	Indep	DH	Cont Care
Mean HB	14.3	13.7	12.7	12.3
Number (%) anaemic	2 (7%)	6 (15%)	11 (28%)	15 (55%)
Mean EPO	12.34	16.55	19.54	21.23

**Conclusion**

EPO response to anaemia in older people seems to be preserved regardless of their functional status. Furthermore, the EPO response of "non anaemic" older people provides physiological evidence for the hypothesis that Hb levels higher than those clinically recommended confer clinical advantage.

## PROVISION OF PARKINSON'S DISEASE MEDICATION TO HOSPITAL INPATIENTS

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**Introduction**

Symptoms of Parkinson's disease may be improved with medication. Dose delays or omissions can cause critical decline in an individual's functional level. The Parkinson's Disease Society encourages self-medication for hospital inpatients to ensure optimal ongoing medication provision throughout a hospital stay. This study is the first to investigate whether there are problems administering Parkinson's medication to inpatients across the full range of hospital specialties and whether use is being made of self-medication.

**Methodology**

Between 1st March 2004 and 30th June 2004 all inpatients with Parkinson's disease were identified. Case notes and drug cards were examined for baseline characteristics, medication delays, dose omissions, routes of administration and patient self-medication.

**Results**

104 patients were studied, median age 80 (range 57 to 90), 59% female. 92% were emergency medical admissions, 6% emergency orthopaedic, median admission length 32 days (range 1 to 120).

For 9 patients usual medication timings were included in the initial clerking.

73 patients (70.2%) experienced a delay in receiving their first dose of Parkinson's medication. The delay was longer with dopamine agonists than with levodopa formulations (median delay 62 hours versus 22 hours). Subsequent dose omissions were common, with 81% of patients experiencing at least one omission and an average of 8.2 dose omissions per patient.

1 patient received an alternative to oral medication (subcutaneous apomorphine).

Only 6 patients (5.8%) self-medicated at any stage during admission.

**Conclusion**

Parkinson's medication is poorly administered within the whole hospital setting, the main problems being delayed first in-hospital dose and frequent subsequent dose omissions. Self-medication is uncommon among this group and increased utilization may be a means of improving drug provision.

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**MANAGING PARKINSON'S DISEASE  
MEDICATION IN HOSPITAL: THE  
PATIENT'S PERSPECTIVE**

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**Introduction**

Parkinson's disease affects approximately 2% of over 65's in the UK and is therefore frequently encountered among hospital inpatients. People with Parkinson's disease may fear sub-optimal provision of usual medication during hospital admission (Parkinson's Disease Society Information Sheet 61, March 2003). This study investigates the experience of members of the Sheffield Parkinson's Disease Society (PDS) admitted to hospital within the last 3 years.

**Methods**

Questionnaires were devised to gather quantitative and qualitative data about inpatient experience, specifically, whether drugs were given at individual preferred times, details of problems encountered and any perceived effect on health of altered medication provision. Questionnaires were distributed to all 150 members of the Sheffield branch of the PDS, with a stamped addressed envelope to aid reply.

**Results**

106 replies were received (response rate 71%). 55 respondents had been in hospital within the last 3 years. 48 were on Parkinson's drugs during their admission, of these 34 (71%) said they received their Parkinson's drugs at their preferred times. 14 (29%) did not. Qualitative data revealed two major themes: anxiety regarding medication provision and potential or actual worsening of function consequent upon sub-optimal medication provision. Comments included "Anxious", "Got them if staff reminded", "Stiff muscles so couldn't have physiotherapy", "Couldn't swallow so lost weight". 11 respondents included descriptions of a caring environment and staff.

**Conclusions**

Members of the PDS who were able and motivated to respond to our questionnaire are likely to be a less disabled, better informed and more greatly empowered subgroup of people with Parkinson's disease. Even among this population there are significant reported problems with provision of Parkinson's disease medication whilst in hospital.

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**123 FP-CIT(DATSCAN) SPECT IMAGING  
IN PARKINSONISM ; IS IT VALUABLE IN  
DIFFERENTIATING BETWEEN  
IDIOPATHIC PARKINSONS DISEASE(IPD)  
AND VASCULAR PARKINSONISM(VP) IN  
THE ELDERLY?**

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**Introduction**

IPD and VP are common causes of Parkinsonism in the elderly and differentiation is difficult clinically. Parkinsons Plus Syndromes(PPS) are rare. VP patients generally do not respond to levodopa(LD) whereas a positive response supports IPD. However effects of LD are difficult to evaluate because achievement of sufficiently large and sustained doses to assess efficacy can be limited by development of disabling side effects.

DaTSCAN imaging of presynaptic dopamine function has high specificity and sensitivity in the diagnosis of IPD but its role in VP is unclear.

This study addresses the value of DaTSCAN imaging in differentiating these two causes of Parkinsonism in the elderly.

**Methodology**

20 subjects aged over 75 years (mean age 79.8 years; 13 male), with Parkinsonism were divided into 2 groups according to their clinical response to a therapeutic trial of LD, minimum 100mg tds for 6 weeks: 10 positive and 10 negative. All underwent DaTSCAN imaging with informed consent

A trained radiologist, blind to the clinical details, rated each scan normal or abnormal.

**Results**

1 subject was a protocol violator; 2 images were uninterpretable.  
8/9(89%) LD responders had abnormal images, consistent with IPD.  
4/8(50%) non-LD responders had normal images, consistent with VP, 4/8(50%) had abnormal images consistent with IPD or PPS  
( $p=0.131$ , Fishers Exact Test)

**Conclusion**

DaTSCAN imaging is of benefit in assessing elderly patients with Parkinsonism who fail an initial trial of LD. Those with normal images should be treated as VP, whereas those with abnormal images should be reviewed clinically and therapeutically.

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**SCREENING OF DEMENTIA AND DEPRESSION AND STUDY OF ASSOCIATED FACTORS IN THE ELDERLY PATIENTS**

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**Introduction**

More than 60% of the world's elderly population lives in the developing countries. India having the more than 76 million elderly population. Dementia and Depression of later life is emerging as a major public health problem. Primarily because of lesser resources for health research developing countries have not been able to report reliable data on mental health of elderly.

**Methodology**

Total 153 geriatric patients (age 60 and above) examined (March 05 to April 05) who attended the Curative And Preventive General Practice (CPGP) OPD of SSG Hospital. Hindi Mental Status Exam (HMSE) by Ganguli et al-1994 and Geriatric Depression Scale (GDS) was used. Score below the 90th percentile of the sample taken as the operational cut-off score for the HMSE, while score >5 taken as the depression.

**Results**

Out of the total 153 patients, 82 were male and 71 were Female. 41.2% were Illiterate. 39.2% were cognitive impaired (score < 22). 30.8% (60-70 years), 53.8% (70-80 years) and 85.7% (> 80 years) were cognitive impaired. (p=0.0086). 47.9% female and 31.7% male were cognitive impaired. (p=0.01). Education also having the positive association with HMSE score (p=0.004). 68.3% (Illiterate), 25% (5th-10th std.) while 41% (more than 10th std) were having GDS score >5 (p=0.0003). Education also having the significant association with depression (p=0.0007). 47.6% male and 52.1% female were depressed (p=0.57). 80% cognitive impaired also having depressive symptoms.

**Conclusion**

Age, gender and literacy significantly associated with the dementia and depression.

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**THE OPTIMUM LEVEL OF ANTICOAGULATION FOR SECONDARY PREVENTION OF STROKE IN ATRIAL FIBRILLATION: A CASE-CONTROL STUDY**

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**Introduction**

Previous studies concluded that the optimum international normalised ratio (INR) for prevention of stroke in atrial fibrillation (AF) is 2.0-4.0. However, previous ischaemic stroke (IS) is a strong risk factor for further stroke. We investigated whether the minimum INR for secondary prevention is greater than 2.0, whilst recognising the increased risk of haemorrhagic stroke (HS) at higher INRs.

**Methods**

A stroke register identified cases who suffered a recurrent stroke (IS or HS) whilst taking warfarin for stroke prevention in AF. Matched controls had suffered previous IS and been similarly anticoagulated but had remained stroke-free thereafter. The admission INR for cases was compared with the nearest available INR for controls. Data were collected retrospectively from hospital records.

**Results**

34 cases (28 IS, 6 HS) were compared with 51 controls. Diabetes was commoner amongst cases (27% vs. 8%, p=0.02). The table shows positive likelihood ratios (LR+) with 95% confidence intervals for recurrent stroke (IS and HS) at different INRs:

INRs less than 2.2 were more frequent in the 'case' group (LR+ 2.1, p=0.01). INRs preceding admission showed no difference.

	Admission INR				
	<2.0	2.0-2.4	2.5-2.9	3.0-3.4	>3.4
Recurrent Strokes versus Controls					
LR+	2.8 (1.3-6.2)	0.6 (0.3-1.2)	0.7 (0.3-1.4)	0.5 (0.1-2.0)	4.5 (0.7-31.2)

**Conclusions**

INRs 2.0-3.4 are broadly protective, but a lower limit of 2.2 may be more advisable for secondary prevention. A randomised trial comparing different INR ranges is merited.

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### HOMOCYSTEINE AND POST-STROKE COGNITION

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#### Introduction

We investigated whether total homocysteine levels (tHcy) are associated with post-stroke cognitive decline over two years.

#### Methodology

171 non-demented subjects donated blood samples at three months post-stroke. The CAMCOG and the Cognitive Drug Research (CDR) computerised battery were performed at 3, and 27 months. Diagnosis of dementia or a total CAMCOG score of less than 80 by 27 months was our primary outcome measure of cognitive decline. Secondary outcome measures were changes in i) total CAMCOG score ii) executive function and iii) language expression sub-scores from the CAMCOG. We examined the association of outcomes with tHcy and potential confounders by means of forward stepwise logistic and linear regression.

#### Results

51% had moderate hyperhomocysteinemia. 127/171 subjects have been assessed at 27 months to date. 100 subjects did not have dementia or a total CAMCOG score of less than 80 at 27 months. Of the 27 participants who cognitively declined by 27 months, 17 had dementia. Mean tHcy were 16.9 and 15.7  $\mu\text{mol}$  per litre for decliners and non-decliners respectively. tHcy did not significantly associate with the outcome measures at 27 months when homocysteine was treated both as a continuous and categorical variable.

#### Conclusion

We found no associations of tHcy with changes in cognitive scores, cognitive decline or dementia between 3 and 27 months post-stroke. This suggests that single post-stroke homocysteine measurements may not be useful in predicting dementia or cognitive decline.

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### WHAT ARE THE CLINICAL CORRELATES OF INSTITUTIONALISATION AFTER STROKE?

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#### Introduction

Given current emphasis on reversing trends in institutionalisation, it is critical to understand the relationship between strokes and institutionalisation for health economic reasons, and to aid the decision-making process for stroke professionals, patients and carers. This study aimed to identify factors that were associated with institutionalisation one year post-stroke.

#### Methods

Subjects were recruited from a community-based register of first-ever strokes in an inner-city population, registered between 1995-2000. Subjects institutionalised one year post-stroke were compared with those living at home in terms of demographic details, stroke risk factors, initial post-stroke impairments and stroke subtypes.

#### Results

Of 828 subjects alive at one year post-stroke, 709(86%) were living at home (group 1) and 119(14%) were institutionalised (group 2). Group 1 was younger than group 2 (mean age(SD) 67.1(13.2) vs 75.3(10.5) $p<0.001$ ); group 1 had more males (56% vs 43%, $p=0.008$ ). Group 2 had more total anterior circulation infarcts (23%vs8%), but fewer lacunar infarcts (26%vs34%), significantly higher proportion of visual neglect (32% vs14%), dysphagia (55%vs22%), dysphasia (40%vs22%), and urinary incontinence (57%vs16%).

Multivariate analyses using stepwise backward logistic regression showed that institutionalisation was most significantly associated with urinary incontinence (OR 5.2; 95%CI:3.26-8.33); other associations included age>75 (OR 2.9; 95%CI:1.46-5.55), dysphagia (OR 2.7; 95%CI:1.73-4.53) and dysphasia (OR 2.0; 95%CI:1.17-3.16).

#### Conclusion

Age>75, dysphagia, dysphasia and urinary incontinence are independently associated with institutionalisation one year post-stroke. Addressing these impairments may help stroke carers in their efforts to reduce institutionalisation.

## PLANNED RESEARCH

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**THE PREVALENCE OF VERTEBRAL FRACTURES IN HIP FRACTURE PATIENTS AND THEIR RELATIONSHIP TO DXA AND BONE BIOCHEMISTRY**

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**Introduction**

Hip fracture patients are at high risk of morbidity and mortality within the first year of fracture and of disability thereafter. We looked at patients presenting with a hip fracture to see the frequency of vertebral fractures on DXA scanning in this group.

**Methods**

90 patients presenting with a hip fracture had DXA and lateral morphometry carried out. Osteoporosis was defined as T score of < - 2.5 and osteopenia as a T score of < - 1.0 at the hip or spine. Serum bone markers performed within 48 hours of admission included Osteocalcin(OC), C-telopeptide (C-tx), Parathyroid hormone(PTH) and 25(OH) vitamin D. Creatinine clearance (CrCL) was estimated using cockcroft & gault equation.

**Results**

24/90 (27%) had vertebral fractures,(16f and 8M), average age 81 yrs of whom 16(66%) had evidence of 2 or more on lateral morphometry. Average femur T score was -3.5 in those with vertebral fracture as apposed to -2.4 in those without(p<0.004). CrCL average was 42.2ml/min. PTH was within normal range and mean osteocalcin being 18.98(range 11-50) and C-tx 0.5 (range 0.01-0.5) suggesting lower bone turnover here. Average vitamin D was 14.3ng/ml.

**Conclusion**

27% of patients with hip fracture had evidence of vertebral fracture with a low level of vitamin D highlighting the need for vigilance in assessing those with evidence of vertebral collapse/fracture in order to prevent further morbidity with future hip fracture.

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**COMMUNICATING INFORMATION ON CARDIOPULMONARY RESUSCITATION (CPR) TO HOSPITALISED PATIENTS**

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**Introduction**

Effective communication with patients on end of life issues is of paramount importance. Nationally agreed guidelines recommend written information on CPR for hospitalised patients. We previously demonstrated that patients were unlikely to initiate discussion on CPR when a summary document was displayed adjacent to their beds.<sup>1</sup> The aim of this interview based study was to determine if patients were aware of the CPR summary document, had read it and would request detailed information.

**Methodology**

A prospective questionnaire-study. An A4 summary document on CPR decision-making process with information on further detailed information was placed at the foot of each bed on the stroke unit. On the elderly care ward it was displayed prominently over the head of all beds. The nursing staff kept a detailed information leaflet on CPR. Competent patients were randomly invited to participate in the study.

**Results**

Document	Elderly care ward	Stroke unit	Total
Seen	17/37	17/26	34/63
Read	6	12	18
Understood	6	12	18
Leaflet requested	1	4	5

**Conclusions**

Information offered in this manner reached 54% of patients and read and understood by only 18 out of 34(53%) patients. Majority of patients (72%) did not seek detailed information and none discussed it further. This study demonstrates the reluctance of patients to acquire detailed information even when made easily accessible.

**Reference**

1. Communicating information on CPR to hospitalised patients. J Med Ethics. 2004;30(3):311-2.

**COMPARING TYMPANIC  
THERMOMETERS TO THE GOLD  
STANDARD MERCURY  
THERMOMETERS IN ELDERLY  
PATIENTS**

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**Introduction**

Tympanic thermometers have replaced oral mercury thermometers for reasons of hygiene, safety and convenience. Concern has been raised about their agreement with mercury, though few studies looked additionally at repeatability of both methods before comparing the two. Also comparisons in the elderly are less well studied.

**Methods**

Temperatures were taken using a mercury thermometer under the tongue for 3 minutes followed by a tympanic thermometer reading from the left ear in 32 elderly in-patients ( $\leq 70$  yrs). Each measurement was repeated in same order within 10 minutes.

**Results**

From mercury readings, temperature ranged from 35.0 to 37.9 degrees Celsius ( $^{\circ}\text{C}$ ); 3 patients had a temperature  $> 37^{\circ}\text{C}$ . Although there was no significant difference between the 4 readings ( $p \geq .16$  for all comparisons), and all 4 were closely correlated (Pearson's  $r: \geq .640$  for all), Bland-Altman analysis revealed poor agreement between mercury and tympanic readings: 95% limits of agreement comparing 1st mercury to 1st tympanic reading (M1/T1) were  $-0.77$  to  $+0.99^{\circ}\text{C}$ . Mercury repeatability (M1/M2) was high with 95% limits of agreement from  $-0.23$  to  $+0.24^{\circ}\text{C}$ . Tympanic repeatability (T1/T2) was less good with 95% limits of agreement from  $-0.69$  to  $+0.64^{\circ}\text{C}$ .

**Conclusion**

The tympanic thermometer was less repeatable than mercury; with consequent discrepancy between the two measures. Tympanic temperature readings should be interpreted with caution and in context of the clinical scenario.

Friday, 7 October 2005

## **Platform Presentations**

### **Session J.3, 09.50 - 10.15**

Epidemiology and Law & Ethics

### **Session K.2, 09.25 - 10.15**

Cardiovascular and Epidemiology

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**WHO TAKES PART IN  
EPIDEMIOLOGICAL STUDIES OF  
OLDER PEOPLE?  
REPRESENTATIVENESS AND  
RESPONSE BIAS IN THE  
HERTFORDSHIRE COHORT STUDY**

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**Introduction**

The Hertfordshire Cohort Study (HCS) comprises 3,000 men and women born in Hertfordshire 1931-39, for whom birth weight and infant development was recorded by midwives; and whose adult diet and lifestyle, and prevalence of cardiovascular disease, osteoporosis, sarcopenia and other chronic disorders has been assessed recently. The representativeness of this cohort, and response bias effects, are unknown.

**Methods**

We compared the socio-economic, anthropometric, medical and functional characteristics of participants in HCS and the nationally representative Health Survey for England (HSE). We assessed response bias between the HCS home interview and clinic.

**Results**

HCS and HSE participants were broadly comparable although HCS participants were less likely to be in the extremes of the socio-economic distribution, were taller, had better self-reported general health (excellent/very good, HCS vs HSE: men 54.3% vs 36.2%, women 43.8% vs 33.0%), and HCS women were less likely to be current smokers (11.5% vs 22.5%) or heavy drinkers (13.2% vs 23.8%  $\geq$  8 units weekly). HCS clinic participants smoked less (ever smokers: 67.7% men, 39.6% women) than those only completing the home interview (80.7% men, p=0.06; 53.8% women, p=0.003), and had better self-reported health (excellent to good: 89.9% vs 64.6% men, p<0.001; 83.7% vs 71.8% women, p=0.03).

**Conclusion**

HCS results can be reasonably generalised to the wider population of older people in England. In common with many epidemiological studies, a 'healthy' responder bias was evident in HCS.

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**GERIATRICIANS VIEWS ON  
LEGALISATION OF VOLUNTARY  
EUTHANASIA (VE) AND DOCTOR-  
ASSISTED SUICIDE (DAS)**

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**Introduction**

Current debate on the legalisation of VE and DAS has been brought to the fore by Lord Joffe's Assisted Dying for the Terminally Ill Bill. We sought to determine the views of geriatricians on this subject.

**Method**

Anonymous postal questionnaire survey of all BGS members conducted mid-2004

**Results**

59% (842/1426) of questionnaires were returned. The majority of geriatricians thought there was no situation in which VE (66% (514/784) no, 18% yes, 16% unsure) or DAS (71% (554/781) no, 15% yes, 14% unsure) should be legally allowed. There was no relationship between responses and age or sex of geriatricians. Themes that emerged from geriatricians' comments were:

- ◆ "doctors should not be involved in killing people"
- ◆ involvement of doctors would further undermine doctor-patient relationships
- ◆ doctors, for and against legalisation, felt they personally would be unable to carry out VE or DAS
- ◆ improvement in access to optimal palliative care should be the priority
- ◆ doctrine of double effect far more acceptable than VE/DAS
- ◆ vulnerable elderly people could not be adequately protected by any legislation
- ◆ autonomy and the rights of those too disabled to commit suicide needed consideration
- ◆ VE/DAS might be appropriate for a tiny number of individuals especially those with progressive neurodegenerative conditions

**Conclusion**

The majority of geriatricians do not support legalisation of VE or DAS.

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**CAROTID SINUS HYPERSENSITIVITY IN THE COMMUNITY**

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**Introduction**

Carotid sinus hypersensitivity (CSH) is a common cause of syncope and falls in the elderly. However its prevalence in community-dwelling asymptomatic individuals is unclear. The current study aimed to determine the prevalence of CSH and define heart rate (HR) and systolic blood pressure (SBP) responses to carotid sinus massage (CSM) in (a) an unselected community sample of older people and (b) a sub-sample with no prior history of syncope, dizziness or falls.

**Methods**

Subjects over 65 years were randomly sampled from a general practice database and stratified for age and gender. Consenting participants underwent supine and upright CSM with continuous HR and BP monitoring. CSH was defined as asystole > 3s and / or a SBP drop >50mmHg.

**Results**

272 participants had CSM. CSH was present in 107 (39%); age (OR 1.05 95%CI 1.00, 1.09) and male sex (OR 1.71; 95%CI 1.04, 2.82) independently predicted CSH. Symptoms accompanied CSH in 16%. In the sub-sample of 80 participants, CSH was present in 28 (35%). The 95th percentile for response was 7.3 seconds' asystole and 77mmHg drop in SBP.

**Conclusion**

CSH is common in older persons, even those with no prior history of syncope, dizziness, or falls. Derived normal thresholds for HR and BP responses are larger than previously reported in symptomatic groups. When present, CSH cannot be assumed to be the attributable cause in those presenting with syncope.

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**TRANSCRANIAL DOPPLER-ASSISTED CAROTID SINUS MASSAGE IS ESSENTIAL IN THE DIAGNOSIS OF CAROTID SINUS HYPERSENSITIVITY**

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Carotid sinus hypersensitivity (CSH) is an important, potentially treatable cause of syncope. Supine and upright carotid sinus massage (CSM) is essential in its diagnosis. There remains however a lack of standardization of the most vital aspect of the methodology - the ability to assess whether the carotid sinus is being compressed. A simple way of observing this is by middle cerebral artery (MCA) transcranial Doppler (TCD) ultrasonography during CSM.

**Methodology**

26 patients with a diagnosis of CSH and 13 controls underwent CSM (European Society of Cardiology recommended guidelines) with simultaneous bilateral MCA TCD monitoring. The observed characteristic TCD signal variation in MCA blood flow velocities provided a marker of successful CSM.

**Results**

39 subjects underwent 147 first attempt CSMs. 27 % were unsuccessful on TCD, with 23 % of CSMs failing in the patient group. Of these 13 were repeated with 46 % being successful on repeat. 35 % CSMs failed in the control group, 4 were repeated with 25 % being successful on repeat. Failure rate of at least one first CSM attempt was 69 % in both the patient and control groups.

**Conclusions**

Currently recommended CSM methodology does not facilitate accurate and reproducible monitoring of whether or not mechanical massage of the carotid sinus has occurred. Simultaneous MCA TCD provides a simple way of achieving this and now forms part of the standardized Leicester CSM protocol.

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**A RANDOMISED CONTROLLED TRIAL OF WARFARIN AND ASPIRIN FOR STROKE PREVENTION IN OCTOGENARIANS WITH ATRIAL FIBRILLATION (WASPO)**

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**Introduction**

Atrial fibrillation(AF) is the commonest chronic arrhythmia with a prevalence of 9% in octogenarians. AF accounts for 24% of the stroke risk in this population. Although trials demonstrate reductions in stroke with warfarin, audit data show that it is still underused. However anticoagulation in the very elderly is not without risk.

**Methods**

Randomised open labelled prospective study of thromboprophylaxis for AF. Patients aged >80 and <90 were randomised to receive adjusted dose warfarin (INR 2.0-3.0) or aspirin 300mg. All patients had permanent AF, were ambulant, had Folstein mini mental scores >25 and had no contraindications to either treatment. Follow up was for 1 year with 3 monthly visits. The study was designed predominantly to test tolerability, as it was not powered for stroke/thromboembolism. The cumulative combined end points were death, stroke/thromboembolism, serious bleeding, drug intolerance requiring withdrawal and 2 INRs>4.5.

**Results**

75 patients (warfarin 36; aspirin 39) were entered (mean age 84, 47% male). There were significantly more end points with aspirin (13/39;33%) than warfarin (2/36;6%), p=0.002. 10/13 aspirin end points were caused by intolerance (7) and serious bleeding (3); there were 3 deaths (2 aspirin, 1 warfarin).

**Conclusion**

Adjusted dose warfarin was significantly better tolerated with fewer adverse events than aspirin 300mg in this elderly population. Although aspirin 75mg may have been better tolerated, there is no evidence for efficacy in AF at this dose.

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**DOES ATRIAL FIBRILLATION CAUSE COGNITIVE DECLINE? THREE-YEAR FOLLOW-UP RESULTS OF THE COGNITION AND ATRIAL FIBRILLATION EVALUATION (CAFÉ)**

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**Introduction**

The increasing prevalence of dementia highlights the importance of risk factors. Cross-sectional studies have demonstrated associations between non-valvular atrial fibrillation (NVAF), silent cerebral infarction and decreased cognitive function. CAFÉ is a prospective study of cognitive decline in recent onset NVAF. At baseline and 12 months we found no consistent relationship between NVAF and cognition. We now report the three-year follow-up of the CAFÉ cohort.

**Methods**

Assessment of 362 people over 60 included stroke risk factors and neuropsychological tests, repeated at one and three years. Cases (174) with recently identified NVAF were matched for age, sex and GP practice with sinus rhythm controls (188). Data comparison using parametric and non-parametric techniques included stratification for antithrombotic therapy.

**Results**

At three years 71 cases and 91 controls remained, giving an attrition rate for cases (59%) versus controls (52%); p = 0.15 (n/s). Analysis of change in cognitive function between baseline and 3 years revealed no clinically important differences between cases and controls, nor between subgroups on aspirin, warfarin or neither. Age and other confounders did not influence the results.

**Conclusions**

There was no association between overall cognitive decline and NVAF after three years' follow-up, nor any effect of antithrombotic therapy. This is consistent with our baseline and 12-month results, but conflicts with previous studies. Cognitive decline is probably multifactorial and any influence of NVAF was not identified from this study.

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