PREVALENCE AND PROFILE OF COGNITIVE IMPAIRMENT AND DEMENTIA IN PATIENTS WITH CAROTID SINUS SYNDROME (CSS) AND CAROTID SINUS HYPERSENSITIVITY (CSH)

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Introduction
The prevalence of CSS/CSH is high in dementia. We hypothesised that repeated hypotensive episodes are a cause of cognitive impairment and dementia. Our objective was to investigate the prevalence and profile of cognitive impairment and dementia in patients with syncope and falls due to CSS/CSH compared with CSS/CSH-free controls.

CSS: >3 seconds asystole and/or a >50mmHg fall in systolic blood pressure during carotid sinus massage in patients with recurrent syncope or falls for whom abnormal haemodynamic response was attributable cause of events. CSH: Abnormal haemodynamic responses, but not clearly the attributable cause of symptoms.

Methods
397 patients (mean age 79 yrs) with CSS/CSH had clinical and neuropsychological evaluation - MMSE, CAMCOG and computerised CDR test battery and DSMIIIR (dementia criteria). Patients were compared to 146 healthy, CSS/CSH-free controls (73yrs).

Results
Overall, 14% of patients and 0% controls had dementia (DSMIIIR criteria). Excluding those with dementia, 16% of patients and 4% of controls had cognitive-impairment-no-dementia (CIND). Dementia-free patients with CSH were worse than controls for CAMCOG total score (p=<0.001), CAMCOG executive function (p=<0.001) and CDR power of attention (p=0.006) after adjustment for age, education, gender, residential status, cardiovascular risk factors and medication.

Conclusions
Cognitive impairment and dementia is prevalent in patients with falls or syncope due to CSS/CSH and their neuropsychological profile was consistent with watershed lesions. Early intervention for symptoms of CSS/CSH may modify/prevent cognitive decline and dementia.

IDENTIFYING SEVERE AND MODERATE PSYCHOLOGICAL DISORDERS AMONG OLDER PEOPLE: THE USE OF LATENT CLASS MODEL ON RESPONSES TO GHQ-12

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Introduction
Classifying people using the General Health Questionnaire (GHQ) relies on comparisons with psychiatric diagnosis, optimal cut points being determined by receiver operating characteristic (ROC) curves. Principal Components and Factor Analysis have been used to identify underlying dimensions of the GHQ. These methods have limitations and produced varying results between studies. Latent Class Models may be a more appropriate approach to discover whether meaningful clusters of individuals can be defined in terms of their responses to the 12-item GHQ.

Methods
Data were obtained from a national survey of 999 individuals, aged 65+ years and living in Britain. MPlus program was used to produce latent class model with clusters of individuals homogeneous in responses to the GHQ-12. The characteristics of each group were defined and comparisons made between groups in an attempt to examine the construct validity of the classification.

Results
The model produced a latent variable that classified, 6% of the sample with many positive responses to the GHQ items, 70% without responses, and 24% who fell into an intermediate group. The three groups had different characteristics including the prevalence of chronic diseases, social participation and other aspects.

Conclusion
A latent class model provides a meaningful classification of older people into three distinct groups of psychological disturbance. Further work examining the association between this method of classification and psychiatric diagnosis is needed to provide evidence of criterion validity.

EARLY PRESENTATION OF GAIT DISORDER IS INDICATIVE OF NON -ALZHEIMER'S DEMENTIA

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Introduction
The presence of a gait disorder in early dementia is an exclusion criterion in the diagnosis of Alzheimer's disease (AD) but this has not been prospectively studied in comparison with Dementia with Lewy bodies (DLB) and there have been few comparisons with Vascular dementia (VAD).

Methods
Two hundred and forty five participants over 65 years of age (40 AD, 39 VAD, 46 Parkinson's diseased dementia (PDD), 32 DLB, 46 Parkinson's disease (PD) and 42 controls) were examined for the presence of gait and balance disorders using Nutt's classification (1).

Results
Gait and balance disorders were most common in PDD (95.7%), DLB (81.5 %), and VAD (74.4%). Gait and balance disorders were less common in AD (37.5%) compared with VAD, PDD and DLB (all $P<0.001$). In mild AD (CAMCOG >65), gait disorders were no more common than in healthy controls. If a gait disorder was present in mild dementia (CAMCOG >65), this was diagnostic of non-Alzheimer's dementia with sensitivity of 80% and specificity of 100%.

Conclusion
The findings support the inclusion of clinically abnormal gait as an exclusion criterion for the diagnosis of Alzheimer's disease. The method used to examine gait is easily clinically applicable and does not require costly equipment. It may therefore be useful to clinicians as a tool in the differential diagnosis of early dementia.

Nutt JG, Marsden CD, Thompson PD Neurology 1993; 43(2):268-279.

REACTIONS TO AN UNEXPECTED PHONE CALL

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Introduction
We often take the ring of a telephone for granted, but how do people aged seventy and over react to an unexpected call?

Methods
A questionnaire survey exploring older people's relationship to telecommunications was sent to a random selection of persons aged seventy and over on a GP list. Those considered by the elderly care practice nurse to be unsuitable were excluded from the postal list. 312 questionnaires were returned from the 518 sent.

Results
When asked about their reaction to the unexpected ring of a telephone 1% (4/297) reported extreme anxiety; 5% (16/297) moderate anxiety; 13% (40/297) mild anxiety; 64% (190/297) no anxiety; 9% (26/297) enjoyment; and 7% (21/297) a number of other neutral responses. 15 left no response.

Those anticipating a degree of anxiety tended to be female (73% vs. 60%, p 0.068), were three times as likely to report poor (or very poor) health (18% vs. 6%, p 0.003) and up to four times as likely to feel lonely (or very lonely) in the last month (15% vs. 4%, p 0.04). They are also more likely to report a health problem hindering their use of the telephone (42% vs. 23%, p 0.004). The effect of responder bias is likely to underestimate those experiencing anxiety.

Conclusion
A significant degree of anxiety may be associated with an unexpected telephone call in this age group.

PHYSIOLOGICAL CORRELATES OF COGNITIVE DECLINE IN AN ELDERLY POPULATION

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Introduction
Cognitive decline in old age is not universal or inevitable. Associations have been observed with neuroendocrine function, but the relevance of other physiological processes is unclear. We predicted that variations in memory in an aging population would be related to the regulation of neuroendocrine and cardiovascular responses.

Methods
139 participants (65-80yrs) were recruited from two general practices in London. Two standardised verbal paired-associates recall tasks were administered to determine declarative memory performance, and a non-memory task (matrix reasoning) was also performed. Salivary cortisol samples were collected every 10mins, while blood pressure and heart rate were measured before, during and after each task. Illness history and medication use were obtained from medical records.

Results
Multiple linear regression analysis, adjusted for age, gender, education, chronic illness, and medication use, revealed that cortisol reactivity was inversely related to memory performance. Additionally, superior memory was associated with more effective post-task recovery of heart rate (in both men and women) and diastolic blood pressure recovery in men. Cardio-vascular recovery effects were independent of covariates, and of levels of heart rate and blood pressure measured during tasks themselves. Neither neuroendocrine nor cardiovascular responses were related to performance of the reasoning task.

Conclusion
Memory in older people is associated both with hypothalamic-pituitary-adrenocortical function and cardiovascular regulation. Disturbances of neuroendocrine and hemodynamic function may leave some individuals more vulnerable to cognitive decline than others.

SELF REPORTED DRINK-DRIVING AMONG MEDICAL OUTPATIENTS

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Introduction
Older drivers achieve higher alcohol concentration and manifest poor coordination at a lower blood level and sustain serious road traffic accident injuries compared to younger drivers. We surveyed drink driving among medical outpatients.

Methods
Patients recorded their usual places of drinking and maximum amount of alcohol they would drink should they drink and drive. The age cut off between young and old drivers was 70 years.

Results
Eighty percent (280/350) of questionnaires were returned. Four spoiled responses were excluded. Twenty nine percent (56/191) of respondents admitted to drink driving. Of these, 18% (10/56) would drink more than three units before driving. There was no difference in self reported drink driving between older and younger age groups (younger 48/159, older 8/32). Those who drank at more than one place were more likely to drink and drive ($p<0.01$).

Conclusion
Many patients report that they drink and drive. This is particularly relevant in older age group who by merit of altered metabolism of and sensitivity to alcohol are more prone to road traffic accidents and susceptible to more severe injuries.

ABNORMAL CEREBRAL AUTOREGULATION IN ELDERLY PATIENTS WITH TREATMENT RESISTANT DEPRESSION

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Introduction
Neuroimaging studies have demonstrated an association between depression in the elderly and cerebrovascular disease. Abnormalities of cerebral autoregulation (CA) would provide further evidence of this association. We aimed to study this association in patients with treatment resistant depression.

Methods
Cerebral blood flow velocities (CBFV) of both Middle cerebral arteries (MCAs) were recorded using trancranial Doppler ultrasound (TCD) in 10 patients. Arterial blood pressure was measured using Finapres. Matched control data were identified from previously studied normal subjects. CA was investigated by two methods: (a) Step responses, a measure of CBFV plotted graphically (b) Autoregulatory index (ARI).

Results
Patient (control) characteristics were: mean age 75.2 (72.3); mean BP 101.5 (101.0); mean BMI 24.1 (24.7); M:F ratio 1:1(1:1). Step responses showed a slight delay in return to the baseline in patients compared with controls, indicating relative impairment of CA. There was a trend towards lower ARI in patients versus controls for both right MCA (mean ARI 5.278 vs. 5.42 respectively) and left MCA (mean ARI 5.283 vs. 5.64) although this was not statistically significant.

Conclusions
♦ The study demonstrates the feasibility to use TCD to investigate CA phenomena in this clinical population and that the procedures are well tolerated by patients.

♦ A larger study will be needed to confirm whether the small differences observed in CA in severely depressed patients are robust and reproducible.

STATINS AND DEMENTIA RISK: MORE OF THE SAME FROM OBSERVATIONAL DATABASES?

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Introduction
Several epidemiological studies have spurred trials of statins to prevent or slow Alzheimer's disease. However, recent evidence from a cardiovascular trial questions the hypothesis. We explored the hypothesis further epidemiologically.

Methods
A population-based nested case-control analysis was conducted in the UK Mediplus database from records on 3.6 million patients provided from general practice since 1992. Incident cases of dementia and 4 controls, individually matched for age and sex and general practice were randomly chosen from three cohorts of people aged 50-89: people on lipid-lowering agents, people diagnosed hyperlipidaemia and not on lipid-lowering agents, and a random group of people without a diagnosis of hyperlipidaema and not on lipid-lowering therapy. Conditional logistic regression was employed with adjustment for confounders.

Results
From 491 cases of dementia and 1964 controls, using the non-lipid-lowering agent and non-hyperlipidaemic persons as the reference group, the adjusted odds ratio for dementia from statin use was 0.28 (95% CI: 0.17 - 0.48), and from being diagnosed hyperlipidaemic was 0.53 (95% CI: 0.37 - 0.77). Shorter use of statins was associated with more protection.

Conclusions
The inverse duration-response relationship and the reduced risk of dementia from being diagnosed hyperlipidaemic indicate that the finding of lower dementia risk with statin use is spurious. Approaches to overcome the problem of selective prescribing and confounding in observational datasets will be discussed.

TRANSIENT NEUROLOGICAL SYMPTOMS DUE TO CHRONIC SUBDURAL HAEMATOMA: IS HEAD INJURY A USEFUL CLUE?

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Introduction
We have shown that the transient neurological symptoms (TNS) due to chronic subdural haematoma (CSH) are identical to a typical TIA (Guptha SH, Puthrasingam S. Age & Ageing 03; S1). We present here data relating to the presentation of head injury preceding the TNSs and assess whether head injury is a useful clue to consider further investigations for CSH in patients with apparent TIAs.

Methods
A Medline search from 1966 for all case reports of CSH presenting with TNSs. A manual search of all relevant articles indexed in the Medline reports.

Results
We identified 35 reports describing 50 patients with CSH presenting with TNSs. A history relating to head injury was elicited in only 44 patients. Head injury occurred in 24 patients (55%). The time scale between head injury and TNSs was available in only 21 patients (range 2-180 days, mean-48 days).

Conclusions
While a history of head injury is a strong historical clue to the diagnosis of CSH in patients with TNSs, it is only present in just over half such cases. Nevertheless, in the current NHS settings, where brain imaging in patients with TIAs is not routine, it should be mandatory to elicit a history of head injury in all patients with apparent TIAs. A previous history of head injury merely indicates a propensity to injury and irrespective of the time scale between head injury and the occurrence of neurological symptoms, brain imaging should be considered ideally, before anti-platelet treatment.

DAY NIGHT DIFFERENCES IN OXYGEN SATURATION IN ACUTE STROKE PATIENTS

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Introduction
Hypoxia is common after acute stroke, and may contribute to stroke progression. Most studies of stroke related hypoxia were conducted at night. The aim of this study was to determine the differences in oxygenation between day and night early after stroke.

Methods
Adult patients with a new stroke were recruited within 72 hours of admission. Oxygen saturation was recorded using a Pulsox-3I pulse oximeter. Data were downloaded using Oximeter Download Software. Daytime recordings were 9am- 9pm and nocturnal readings 10pm- 6am. Desaturations (ODI 4%) were defined as a 4% fall from baseline.

Results
Twenty patients [10 males, 10 females; mean age 77 (SD 9) years; body mass index 25.6 (SD 3); 16 anterior circulation syndrome / 4 lacunar syndrome; 17 infarcts, 2 haemorrhages and 1 tumour were included.

	Day	Night	p-value (Wilcoxon signed nk test)
Mean oxygen saturation (SD) [%]	94.4 (2.1)	93.7 (1.8)	0.03
Lowest oxygen saturation (SD) [%]	83.1% (6.5)	82.3% (7.4)	0.6
ODI4% (median and range)	1.8 (0-7.4)	1.9 (0.2-42.1)	0.06
Time spent with an oxygen saturation<90% [min/hour]	4 (0-5)	5.6 (0-7)	0.9

Conclusions
The mean oxygen saturation early after acute stroke is about 1% lower at night than in the day and there was a trend towards more desaturations at night.

ROLE OF PULSE OXYMETRY IN ASSESSMENT OF ASPIRATION IN STROKE

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Introduction
Dysphagia is a common occurrence after stroke and can result in increased risk of developing aspiration pneumonia. Several screening tests are used including Videofluoropscopy and assessment by speech and language therapists (SALT).

Objective
To compare swallowing assessment from pulse oximetry and SALT in relation to aspiration and its clinical implications.

Methods
44 of 48 consecutive adults admitted with acute stroke were studied. 4 were excluded due to drop in base line oxygen saturation. All were given 10 mls of water to swallow in an upright posture. Pulse oximetry (mean of 3 readings) were performed before, during and 2 minutes after the swallow and patient assessed simultaneously by the SALT blinded to the results of pulse oximetry. A desaturation of 2% or more during or after swallow was taken as unsafe swallow.

Results
21 of 22 patients were identified as safe on basis of pulse oxymetry if given thickened fluids. Which had 100% concordance with SALT assessment.

Out of 18 patients found unsafe on pulse oxymeter two-third were given thickened fluid and one-third were kept nil by mouth by SALT but none of the patients were put on normal fluids which is significant.

Conclusion
Over half of the patients identified as safe by pulse oximeter can be given thickened fluids or soft diet and this method of assessment can reduce the duration and numbers kept nil by mouth.

CAN A PULSE OXIMETER BE USED TO DETECT ASPIRATION IN STROKE PATIENTS WITH AN UNSAFE SWALLOW?

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Introduction
It is unclear whether desaturation during swallowing implies aspiration and if so at what magnitude of desaturation. This study aimed to look for an association between levels of desaturation during swallowing in acute stroke patients and swallow test results.

Methods
144 acute stroke patients underwent a modified bedside swallow screening assessment (mBSA); this used a radio-opaque contrast rather than water and was followed by chest radiography looking for aspirated contrast. Swallow was "safe" if there was evidence of neither clinical nor radiological aspiration. Baseline oxygen saturations were recorded pre mBSA and for 10 minutes thereafter, allowing calculation of the greatest desaturations during 0-5 minutes (T1) and 5-10 minutes (T2) from onset.

Results
On mBSA 74(51.4%) patients had a safe swallow, 65(45.1%) were unsafe and 5(3.5%) aspirated silently. Desaturation by >2% occurred in 35.7% subjects during T1 and 35.3% during T2; only 3.6% desaturated by >5% in T1 and 4.2% during T2. The proportions of safe and unsafe patients desaturating in each time period are given below. There was no significant association between mBSA score and desaturation.

Conclusion
We found no relationship between mBSA score and desaturation at the 2% or 5% level.

	Total (n=144)	Safe (n=74)	Unsafe (n=70)
Number desaturating by ≥2% in T1 (%)	50/140(35.7)	29/72(40.3)	21/68(30.9)
Number desaturating by ≥5% in T1 (%)	5/140(3.6)	2/72(2.8)	3/68(4.4)
Number desaturating by ≥2% in T2 (%)	42/119(35.3)	20/58(34.5)	22/61(36.1)
Number desaturating by ≥5% in T2 (%)	5/119(4.2)	2/58(3.4)	3/61(4.9)

NOCTURNAL OXYGEN TREATMENT DOES NOT IMPROVE ATTENTION AND CONCENTRATION IN MEDICALLY STABLE STROKE PATIENTS

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Introduction
Cognitive impairment after stroke is common problem, and may be related to nocturnal hypoxia. The aim of this study is to test the effect of nocturnal oxygen supplementation on attention and concentration in the stroke patients.

Methods
Medically stable patients were recruited from the stroke rehabilitation ward >2 weeks after a stroke and randomised to receive oxygen 3 L/min (Intervention) or 0.5 L/min (Control) overnight for 2 weeks by nasal canulae. Concentration and attention were assessed using the Alterskonzentrationstest (Hogrefe, Verlag für Psychologie. Göttingen, Seattle) before treatment (baseline) and after the intervention (week2). Fifty-five semicircles with different positions (upside and down) and different patterns (half-black on left or right) are shown and patients are instructed to mark all that exactly match the example on top.

Results

	Intervention N=21		Control N=25		p-value
Age (years ±SD)	72+7		71+8.5		0.6*
	Baseline	Week2-baseline	Baseline	Week2-baseline	Week2-base
Time taken to complete the test (seconds) Median (range)	59(22-245)	-7(-73,10)	72(41-151)	-13(-89,8)	0.3‡
No. of semi-circles identified correctly out of 20 Median (range)	17(8-20)	1(-5,7)	17(4-20)	0.5(-8,15)	0.6‡
No of mistakes out of 35 Median (range)	2(0.0-11)	0.0(-8,5)	1(0.0-26)	0.0(-8,22)	0.4‡
Error percentage Median (range)	12(0.0-43)	-1(-36,5)	6(0.0-61)	0.0(-32,6)	0.7‡

*t-test, ‡Mann-Whitney test

Conclusion
Both groups improved from baseline to week 2. The level of improvement was the same no better in the intervention than in the control group.

MAJOR HAEMORRHAGE AND STROKE RATES IN PEOPLE OVER 75 YEARS IN ATRIAL FIBRILLATION ON WARFARIN

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Introduction
Warfarin effectively reduces the risk of stroke associated with atrial fibrillation but is markedly underused in older people, due to fear of high bleeding rates. There is little data on the rate of haemorrhage in frail older people. This study was performed to determine the incidence of major haemorrhage and stroke in people aged over 75 years with atrial fibrillation on adjusted dose warfarin (INR2-3) who had been recently been admitted to hospital.

Methods
In this retrospective observational cohort study, all patients aged 76 years and over admitted to a major healthcare network between July 1, 2001 and June 30, 2002 with atrial fibrillation on warfarin were enrolled. Information regarding major bleeding episodes, strokes and warfarin use was obtained from patients, relatives, primary physicians and medical records.

Results
There were 228 patients (42% males) included in the analysis, mean age 81.1 (range 76-94) years. Total follow up on warfarin was 530 years (mean 28 months). There were 53 major haemorrhages giving an annual rate of 10.0%, including 24(45.3%) life threatening and 5(9.4%) fatal bleeds. The annual stroke rate following initiation of warfarin was 2.6%.

Conclusion
The rate of major haemorrhage was high in this old, frail group but excluding fatalities, resulted in no longterm sequelae and the stroke rate on warfarin was low, demonstrating how effective warfarin treatment is.

RISKS OF BLEEDING ASSOCIATED WITH WARFARIN TREATMENT IN PATIENTS WITH ATRIAL FIBRILLATION IN CLINICAL PRACTICE

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Introduction
To investigate risk factors associated with bleeding in patients with non valvular atrial fibrillation (NVAF).

Methods
New patients with NVAF referred to anticoagulation clinic were studied. Patients were interviewed personally on their first visit then by telephone 4-6 weekly for a mean (SD) of 19 (8.1) months. They were asked about bleeding events.

Results
402 patients were included over 21 months. One hundred patients had bleeding (11 major and 89 minor), while 302 had no bleeding. There was no significant difference in mean (SD) age between the two groups [72.1 (8.6), and 72.3 (10.9) years respectively, p = 0.8]. Older people (≥75) formed 45% and 51% respectively (p = 0.41). Patients who have bleeding had significantly higher number (SD) of medications per patient [5.5 (2.2) vs 4.6 (2.3), p = 0.001] and more past medical history of ischaemic heart disease (IHD) and hypertension (49% vs 34%, p = 0.004 and 45% versus 22.5%, p = 0.0005 respectively) than patients without bleeding. Target range of INR was achieved in 64% of time in bleeding group and 66% in non bleeding group (p = 0.71). Variability of INR (SD) was significantly higher in bleeding group [5.2 (3.4) versus 2.8 (1.9) p = 0.03]

Conclusions
Variability of INR, number of medications, IHD, and hypertension were identified as risk factors for bleeding, while age had no significant impact on bleeding.

VARIATION IN WINTER EXCESS OF STROKE ADMISSIONS

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Introduction
Increased incidence of cerebrovascular diseases in colder season has been suggested. However, whether it is reflected in number of hospital admissions is unclear.

Methods
We analysed a hospital stroke register (catchment population = 568,000) for 6 seasonal years (1997/98-2002/03). We used Curwen's method (Curwen M. Health Trends 1990/91) to calculate winter excess in admissions [winter = December- March: Winter excess = admissions in {winter - ½ (preceding 4 autumn months + following 4 summer months)}]. We performed stratified analysis by (1) year of admission and (2) different age categories using quartile value of patients' ages.

Results
N = 5484, age range = 17-105. Mean and median ages for different quartile groups were: 60 and 63 (≤ 71), 75 and 76 (72-78), 82 for both (79-84), 89 and 88 (≥ 85).

Table 1 winter excess by year

Year	Autumn	Winter	Summer	Excess
97/98	280	306	273	+29.5
98/99	283	338	300	+46.5
99/00	327	299	283	-6
00/01	299	303	312	-2.5
01/02	316	326	346	-5
02/03	275	324	294	+39.5

Table 2-winter excess by different age groups

Year	Age (years)	Autumn	Winter	Summer	Winter Excess
97/98-02/03	≤71	467	482	499	-1
	72 - 78	436	457	413	+32.5
	79 - 84	458	474	478	+6
	≥ 85	419	483	418	+64.5

Conclusions
There may be an effect of cold weather on the numbers of stroke admissions in old age. Otherwise the 'winter excess' in admissions is variable. Factors such as pathogenetic role of flu outbreaks, excess community deaths in colder season, may be possible explanations. Further studies are required to clarify their influence on the hospital admissions with stroke.

CHARACTERISTICS OF DRIVERS POST-STROKE

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Introduction
Driving is a means of independence for many. This study compared the characteristics of drivers and non-drivers post-stroke. It also quantified the percentage of patients who received a driving assessment.

Methods
Subjects were patients discharged from the Stroke Service from 1998 to 2002. A structured questionnaire by telephone interview was conducted on participants.

Results
141(39%) of 362 patients agreed to participate. Of 72 drivers pre-stroke, 48(67%) returned to driving. Drivers were younger, (58.2±11.7 vs 67.0±10.6), had a lower Modified Rankin Score (median 1 range(0-3) vs 2(0-5)), more likely having normal cognition (56% vs 42%) and more likely to have had a specific assessment for driving (60% vs 50%) compared to non-drivers. Overall 40(56%) of all pre-stroke drivers had some form of driving assessment. Subgroup analysis showed that 81% of patients below 65 returned to driving compared to 45% aged 65 and above.

Conclusion
It is important to identify patients who have the potential to return to driving post-stroke and to arrange appropriate assessment prior to return. This is primarily for ensuring mobility and independence and also for safety of the patient and public. We feel that by having a structured assessment program for driving, the rate of return to driving is good compared to the previous published rate of 30% (Fisk et al. Arch Phys Med Rahabil 1997;78:1338-45) where 87% of subjects did not recall a driving assessment.

COMPARATIVE STUDY OF STROKE OUTCOME BETWEEN YOUNGER AND OLDER PATIENTS

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Introduction
Advancing age is an independent risk factor for stroke. With changing demographic trends, number of older elderly with acute stroke will increase. We examined the impact of ageing on its outcome by comparing between older (>= 85 years) and younger (55-84 years) stroke patients.

Methods
A hospital stroke register, vetted by a stroke research nurse, over a 5-year period (1997-2001) was analysed. Comparison was made for in-patient mortality, destination of discharge from acute setting and hospital stay. Chi-squared or Median Tests were used as appropriate.

Results
N= 4277. Older people (median age =88, range = 85-105) constituted 24.2 % of all acute stroke admissions (N =1105, male= 367). In-patient deaths were significantly higher in older (42.3%) compared to younger (26.4%) age group (X^2_1= 97.9, p < 0.0001). Of the survivors in the older age group 7.1 % were discharged home directly and 45.5% transferred to community or rehabilitation facilities compared to 24.1% and 42.8% respectively in the younger age group (X^2_6 = 197.1, p < 0.0001). The median length of hospital stay in older age group was 8 days compared to 7 days in the younger age group (X^2_1=5.01, p = 0.027).

Conclusions
Our findings suggest that with advancing age there is a poorer outcome in terms of stroke mortality, longer lengths of hospital stay and an increased need for rehabilitation services. Better understanding and appropriate management of oxygenation, cerebral blood flow, and blood sugar in the acute stroke phase, may alter the outcome from cerebrovascular events in extreme old age in the future.

KNOWLEDGE OF SWALLOW ASSESSMENT IN ACUTE STROKE AMONG MEDICAL STUDENTS AND JUNIOR DOCTORS

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Introduction
National guidelines recommend that stroke patients are assessed for risk of aspiration using a validated water swallow test. The gag reflex is invalid as a test of swallow. Previous studies report poor awareness of this among doctors. We sought to assess knowledge of swallow assessment among medical students and doctors in 2 teaching hospitals.

Methods
A structured questionnaire was directly administered to 71 junior doctors covering acute medical take-in and 28 fourth-year students. Questions included who should perform assessment and by what means, whether gag reflex is helpful and whether respondents were confident of their ability to assess swallow.

Results
Only 33% of doctors thought that they should be involved in swallow assessment. 31% chose gag as the initial assessment method, 65% believed that absent gag implied unsafe swallow and 39% thought that present gag implied safe swallow. 69% were not confident of their ability to assess swallow. Of those confident, 17% chose gag reflex as the initial test. Pre-registration house officers had poorer knowledge of swallow assessment than medical students (64% thought that present gag implied safe swallow, v 29% of medical students, p=0.009).

Conclusions
Almost a third of doctors responsible for acute medical admissions considered the gag reflex to be an appropriate test of swallow in acute stroke. This lack of knowledge may be detrimental to acute stroke patients and needs to be addressed.

CONSUMER INVOLVEMENT IN THE DESIGN OF THE STROKE OXYGEN STUDY

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Introduction
The aim of this public consultation was to explore the views of stroke patients and carers on the design, consent procedures, and follow-up arrangements of a study of oxygen supplementation after acute stroke.

Methods
Focus group meetings were undertaken with “Strokes R Us” (The Young Stroke Group in Stoke-on-Trent), and the “Dysphasia Support Group” from Stafford and Cannock respectively. The format of each meeting was: presentation of a summary of the proposed study followed by free discussion of its details and circulation of a questionnaire.

Results
Seventy-three individuals (49 stroke patients and 24 carers, mean age 64 (range 31-86) years attended the meetings. Seventy percent completed the questionnaires. 98% considered the research question worthwhile, and 98% considered the suggested outcome measures (Rankin, Barthel, Euroquol, Nottingham Extended Activities of Daily Living) relevant. The discussions highlighted that memory, mood, sleep, and speech were important outcome measures for patients and carers. Seventy-five % felt that a family member should give consent on behalf of incompetent patients and 92% would allow a doctor not involved in the study to decide if consent/assent could not be obtained. Eighty percent preferred a clinic appointment, while 20% preferred a postal questionnaire for follow-up. Respondents also suggested a separate questionnaire for carers.

Conclusion
Many of the outcomes suggested by consumers (patients and carers) are not covered by outcome scales most commonly used in stroke trials.

DIURNAL BLOOD PRESSURE FLUCTUATIONS AND CEREBRAL AUTOREGULATION IN CEREBRAL SMALL VESSEL DISEASE

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Introduction
Adequate perfusion of the vascular watershed areas in the deep white matter of the brain supplied by perforating arteries depends upon the interrelationship between blood pressure (BP) and cerebral autoregulation.

Methods
64 patients (40 male, mean age 65 years) with cerebral small vessel disease were recruited. Cerebrovascular disease load was quantified by T2 and FLAIR MRI brain scanning using the Age-Related White Matter Changes (ARWMC) rating scale. Cerebrovascular resistance (pulsatility index) and dynamic cerebral autoregulatory index (ARI) were measured using transcranial Doppler ultrasound techniques. BP was assessed with 24-hour ambulatory monitoring. Fluctuations in BP and cerebral autoregulation were correlated with MRI lesion load.

Results
Subjects had a mean 24-hour BP of 131/73 (SD12/8), median ARWMC score on MRI of 10.5 (IQR 9) (normal range 0-30), mean pulsatility index of 1.1 (SD 0.4) and mean ARI of 5.7 (SD 1.5) (normal range 0-9). Arterial pulse pressure correlated positively with cerebrovascular resistance ($p<0.01$) and white matter lesion load ($p<0.03$). Cerebral autoregulatory capacity (ARI) increased with increasing systolic BP ($p<0.04$) and nocturnal dipping ($p<0.02$), and was higher in patients with high white matter lesion load ($p<0.02$).

Conclusions
Dynamic cerebral autoregulation appears to be upregulated in patients with cerebral small vessel disease, probably to maintain adequate perfusion in the face of sudden changes in blood pressure. Despite this adaptation, physiological fluctuations of BP in long-standing hypertensive patients may increase subcortical ischaemic damage.

EARLY RECURRENCE OF CEREBROVASCULAR EVENTS FOLLOWING A TRANSIENT ISCHAEMIC ATTACK

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Introduction
Recent studies have suggested the risk of suffering an early recurrent cerebrovascular event following a transient ischaemic attack is far greater than previously reported. We wished to quantify this risk in patients seen at the rapid access clinics in East Glasgow.

Methods
Over a six-month period, information was taken from referral letters to the rapid access TIA/Stroke clinics at Stobhill Hospital and Glasgow Royal Infirmary. Subsequent clinic letters and results of investigations were reviewed to enable the original diagnosis and presence or absence of a recurrent cerebrovascular event to be recorded.

Results
Of the 372 new referrals seen during the six-month period, 37 (10%) did not attend for appointment, 130 (35%) had a non-cerebrovascular diagnosis and 205 (55%) were deemed to have suffered a probable or definite new TIA (121 (32.5%)) or stroke event (84 (22.5%)). There were 19 recurrent cerebrovascular events giving a recurrence rate of 9% (95% confidence interval 5%-13%). Of these, 10 (5%, CI 2%-8%) occurred within 7 days of the initial episode and 15 (7%, CI 4%-11%) within 1 month. The only associated risk factor for recurrence, using multivariate analysis, was current smoking.

Conclusion
The recurrence of cerebrovascular events following a TIA is likely to be higher than previously thought. It is uncertain which interventions or strategies, if any, can reduce the risk of early recurrent events and further research in this area is required.

BLOOD PRESSURE LOWERING THRESHOLDS FOR STROKE FROM OBSERVATIONAL DATABASES

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Introduction
The level to which blood pressure should be lowered remains unclear. Trials have not answered the question and prospective cohort studies have few events in the lower categories of blood pressure. We used a large electronic database to address this issue epidemiologically.

Methods
A retrospective cohort analysis was conducted in the UK General Practice Research Database from records on over 6 million patients from 400 general practices. Patients, aged 40 and older with a blood pressure reading in 1993 were followed through to 2001 for the occurrence of stroke. Censoring was employed for patients succumbing to stroke, end of record collection or end of study period. Analyses were conducted using Kaplan-Meier plots, hazard rates and Poisson regression allowing for age, sex, history of stroke, myocardial infarction, heart failure and anti-hypertensive therapy at baseline.

Results
The cohort comprised 397,458 patients, of whom 21,855 suffered stroke over the ensuing 8 years. Stroke rates increased monotonically with age and with blood pressure level. However, below blood pressures of 105-114 mmHg systolic and 65-74 mmHg diastolic, stroke rates reached a plateau or increased. Thresholds were observed in all age groups.

Conclusions
Limits to blood pressure reduction for stroke prevention, guided by epidemiology, occur at a systolic blood pressure of 105-114 mmHg and a diastolic of 65-74 mmHg.

IMPLEMENTATION OF REHABILITATION PRO-FORMA FOR SURGICAL GERIATRIC PATIENTS

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Introduction
A large number of geriatric rehabilitation referrals come from the General Surgical wards. The amount of patient information given in the referral letters can be variable. This can delay appropriate patient placement and rehabilitation. We performed an audit of these letters and implemented a new one-page referral pro-forma.

Methods
We analysed all PRHO referral letters from the General Surgical wards over a six month period. The new rehabilitation pro-forma was then implemented and this was collected over a further six months. We analysed the amount of patient information supplied between the two methods.

Results
We collected 101 referral letters over the 12-month period. Forty six were via the new pro-forma. The mean age of patients was 79.1 +/- 9.1 (43 male: 58 female). There were 45 post-operative patients. The following information was analysed between the old and new methods of referral: ward number (98% vs 100%), name of referring consultant (67% vs 100%; $P<0.001$), past medical history (61% vs 100%; $P<0.001$), on-going medical problems (65% vs 100%; $P<0.001$), social circumstances (43% vs 100%; $P<0.001$), mobility (50% vs 95%; $P<0.001$) and continence (7% vs 95.6%; $P<0.001$).

Discussion
Little information on patients' medical, social and functional status was given in the PRHO referral letter. A simple tick-box pro-forma successfully collected more of these important patient details and allowed prompt referral to the appropriate member of the multi-disciplinary team.