Introduction
Herbal and Alternative Medicines (H&AM) are commonly used and widely available on the high street. However, some preparations are associated with severe side effects or interact with prescribed medication.

Methodology
Health Care Professionals (HCP) were asked to complete a questionnaire to assess their knowledge of various H&AM prior to an educational session on the topic. The questionnaire contained 20 true/false statements in 2 equal sections. Section 1 tested knowledge of common H&AM and their indications. Section 2 tested side effects and interactions. Each section was allocated 10 marks.

Results
54 HCP completed the questionnaire: 45 doctors (16 Consultants, 6 Registrars, 11 SHO’s, 3 PRHO’s and 9 non-training grades), 8 nurses and 1 pharmacist. Most HCP (52, 96%) were aware of H&AM use in the community, but personal use was low (6, 11%). Just 11(20%) HCP considered H&AM to be ‘safe’ but only 10 (8 consultants) regularly enquired about their use.

The average scores (max = 10) for Sections 1 and 2 were:

<table>
<thead>
<tr>
<th></th>
<th>Section 1</th>
<th>Section 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consultants</td>
<td>2.7</td>
<td>2.0</td>
</tr>
<tr>
<td>Registrars</td>
<td>4.7</td>
<td>2.3</td>
</tr>
<tr>
<td>SHO’s</td>
<td>2.2</td>
<td>2.3</td>
</tr>
<tr>
<td>HO’s</td>
<td>4.0</td>
<td>1.3</td>
</tr>
<tr>
<td>Non-training grades</td>
<td>1.9</td>
<td>1.5</td>
</tr>
<tr>
<td>Other staff</td>
<td>1.8</td>
<td>1.1</td>
</tr>
</tbody>
</table>

The substances people knew most about were garlic and glucosamine (47 and 39 correct answers respectively).

Conclusion
Locally HCP of all grades appear to know very little about H&AM. Sessions on H&AM should be incorporated into existing medical education programmes. A re-audit is planned.
### SOCIAL DEPRIVATION AND OSTEOPOROTIC LOW TRAUMA FRACTURES

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University Hospital and City PCT, Nottingham

#### Introduction
The relationship between social deprivation and osteoporotic fractures remains unclear, particularly in the elderly. The aim of this study was to examine this relationship.

#### Methodology
Data on all patients (males aged ≥60 yrs, females aged >50 yrs) presenting to the trauma & orthopaedic department with a low trauma fracture were collected prospectively over a 12 month period (Jan-Dec 2003). Population statistics were collected from the Nottingham Census data, together with social deprivation scores (as assessed by the Index of Multiple Deprivation [IMD]), linked to patients by individual postcodes.

#### Results
There were 1392 limb fractures and 655 hip fractures [mean age 70.7 (11.6)]. 80.3% of hip fractures occurred in females [mean age 81.5 (9.4)]. The mean IMS score for Nottingham was 25.2. A total of 65 wards (population 55,479) were classed as non-deprived (IMD score below 25.2) and the other 25 deprived (population 63,308). Fracture rates were higher for limb fractures (RR 1.3; 95% CI 1.1, 1.5 p<0.01) but not hip fractures (RR 1.2; 95% CI 0.9, 1.4 p=0.09) comparing between deprived and non-deprived wards. Further analysis in those aged ≥75 yrs were similar (limb fractures RR 1.20; 95% CI 1.1, 1.4 p=0.039, hip fractures RR 1.1 95% CI 0.9, 1.4 p=0.10).

#### Conclusion
The incidence of low trauma osteoporotic limb fractures is higher in the more socially deprived population and extends further to the elderly. It is well documented that in the presence of a low trauma limb fracture the risk of hip fracture is increased 2-4 fold, therefore these patients are clearly a high target for falls and osteoporosis interventions.

### EFFECTS OF 50G CARBOHYDRATE DRINKS OF DIFFERING GLYCAEMIC EFFECTS AND NUTRIENT CONTENT ON BLOOD PRESSURE IN HEALTHY OLDER PEOPLE

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Department of Geriatric and Rehabilitation Medicine, Royal Adelaide Hospital, South Australia and Department of Medicine, University of Adelaide, South Australia

#### Introduction
Post-prandial hypotension (PPH) is prevalent, associated with morbidity but yet the pathophysiology is poorly defined. The blood pressure (BP) lowering effects of 50 g carbohydrate drinks with varying glycaemic effects and nutrient content were determined.

#### Methodology
Two randomized studies involving ten healthy elderly subjects. BP and plasma glucose levels were determined following ingestion of equal volumes of water and 50g carbohydrate drinks with reported varying published glycemic indices (low 'Apple&Cherry' juice, intermediate ['Fanta Orange'], high [glucose]) in study 1 and equal volumes of water and drinks containing 50g of glucose, fructose and sucrose in study 2. The glycaemic index acted as a surrogate marker for the expected glycaemic effect.

#### Results
Glucose and 'Fanta Orange' ingestion with very differing observed glycaemic effects caused a similar (SBP P=0.894, DBP P=0.497, MAP P=0.5379) and significant decrease in BP over time (P<0.05), whereas the decrease in BP was significantly greater (P<0.05) following 'Fanta Orange' (100% sucrose) than 'Apple&Cherry' (mainly fructose) juice ingestion, despite their almost identical observed glycaemic effects. In Study 2, glucose and sucrose caused a similar (P>0.05) and significant decline in BP over time (P<0.05) whilst fructose had no effect on BP.

#### Conclusion
The nutrient content and not the glycaemic effect determines the effect of a drink on subsequent BP. Dietary manipulation replacing sucrose (table sugar) with fructose may be effective in the management of PPH in older people.
**THE EFFECT OF BALANCE TRAINING ON POSTURAL STABILITY IN PARKINSON’S DISEASE: A PILOT STUDY**


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**Introduction**

Falls and postural instability are a common problem in Parkinson’s disease (PD). Strength and balance exercise has been successful in improving postural stability and reducing falls in older people. No published papers have described such an intervention specifically designed for people with PD.

**Methodology**

12 participants with PD (mean age 69, disease duration 8.6 years, Hoehn and Yahr score 3.4) were recruited from clinics at King’s College Hospital and randomised into either a balance-training (n = 7) or a seated exercise programme (n = 5) (20 sessions /10 weeks). Clinical balance measurements, a disease rating scale (UPDRS) and the physiological profile assessment (Lord et al, 2003) were measured before and after interventions.

**Results**

Participants completed 100% balance-training sessions and 98% seated exercise sessions. There was a significant reduction (Mann-Whitney) in the number of steps taken to turn 180º (p = 0.02) and postural sway (eyes closed on foam) (p = 0.03) following the balance training compared to the seated exercise programme. Analysis of change in the balance-training group (Wilcoxon) alone also demonstrated significant reduction in sway (eyes open on foam) (p = 0.03). Changes in muscle strength and the disease rating scale were not statistically significant.

**Conclusion**

This study suggests that people with PD are able to improve specific areas of postural stability with a 10 week balance training programme. Studies powered to detect falls reduction are now required.

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**FRACTURE RISK FACTORS AND FRACTURE-PROTECTIVE PRESCRIPTIONS IN NONAGENARIANS: THE CAMBRIDGE CITY OVER-75S COHORT STUDY (CC75C) FOLLOWED-UP AFTER 17 YEARS**

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**Introduction**

Despite steeply increasing incidence of falls and fractures in extreme old age, medications that can reduce fracture risk are often not prescribed. We assessed prevalence of risk factors for fractures in over-90-year-olds within a population-based longitudinal study (CC75C).

**Methodology**

110 cohort survivors (90 women) were visited in their usual place of residence for interview, calcaneum quantitative ultrasound scan and functional performance measures. Nurse-administered questionnaire data included fall and fracture history, osteoporosis risk factors, medication, and self-reported mobility.

**Results**

57% reported falling at least once in the year before interview and 34% said they had fallen twice. Half reported at least one past fracture, of which 89% occurred when aged ≥50 years old, and 18% had had a hip fracture. Bone strength as measured by Broadband Ultrasound Attenuation (BUA) was low in almost all subjects, and significantly lower in women than men. We found high rates of many established risk factors for falls and fractures - poor mobility, poor eyesight, cognitive impairment, poly-pharmacy and particularly use of psychotropic medication. Only a quarter took any calcium or vitamin D: 10% bought cod liver oil, 18% were on prescribed preparations, just one with additional bisphosphonate.

**Conclusion**

Despite the high prevalence of many risk factors for falls and fractures amongst over-90-year-olds in our study, only a minority are taking calcium, vitamin D or any other medication licensed for prevention of osteoporotic fractures.
HOW SHOULD WE INVESTIGATE RECURRENT DROP ATTACKS?

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Introduction
Drop attacks are a symptom rather than diagnosis and have multiple causes. Despite extensive investigation many patients remain undiagnosed. To determine the attributable cause of drop attacks, compare clinical characteristics of patients with explained versus unexplained symptoms and identify investigations of most value in diagnosis via retrospective cohort study.

Methodology
Subjects: Consecutive patients with recurrent drop attacks presenting to falls service. Investigations: full clinical evaluation, ECG, active stand[AS], carotid sinus massage[CSM], head-up till[HUT], 24-hour ECG/BP, and brain imaging/EEG/other investigations as appropriate.

Results
Attributable diagnoses achieved in 126 (65.3%) of 193 patients: cardiovascular 54(43%); neurological 52(41%); psychogenic 5(4%); drug-related 6(5%); miscellaneous 9(7%). Clinical characteristics: see Table 1. Diagnostic yield: clinical evaluation 45[23%]; CSM 29[20%]; AS 19[10%]; HUT 13[13%]; CT head 10[17%]; ECG 2[1%], ambulatory monitoring 2[1%]; EEG 1[0.5%].

Overall Explained Unexplained P=
N=193 N=126(65.3%) N=67(34.7) 0.0006
Age (range) 75.1(26-94) 77.2(26-94) 71.3(39-91) 0.0006
Female(%) 126(80.3) 93(73.8) 62(92.5) <0.01
Duration of falls (months) 26.4(36.3) 20.5(24.8) 37.5(49.7) 0.0107
Total number falls (SD) 18.6(67.6) 17.7(70.7) 20.4(62.0) ns
Falls in last 6 months (SD) 6.0(12.9) 6.1(13.1) 5.8(12.4) ns
Soft tissue injury(%) 113(58.5) 62(49.2) 51(76.1) <0.001
Fracture(%) 53(27.5) 32(25.4) 21(31.3) ns
IHD(%) 50(25.9) 38(30.2) 12(17.9) ns
CVD(%) 29(15.0) 20(15.6) 9(13.4) ns
Diabetes(%) 20(10.4) 12(9.3) 8(11.9) ns
Hypertension(%) 62(32.1) 38(29.7) 24(35.8) ns
Mean number medications (SD) 2.4(1.9) 2.7(1.9) 1.8(1.9) 0.0038

Conclusion
Patients with unexplained drop attacks despite intensive investigation tend to be younger females on more medications with a longer duration of symptoms.

CASE-MIX ADJUSTED OUTCOME ASSESSEMENT OF HIP FRACTURE CARE: A REPORT ON 16980 CASES FROM 15 HOSPITALS

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Geriatric Medicine1, Edinburgh University, Quantics Consulting2 and Orthopaedic Surgery3, Aberdeen University

Introduction
Hip fracture is a serious injury with variable outcomes. The Scottish Hip Fracture Audit (SHFA) documents casemix, process and outcomes of hip fracture care with 93% follow-up at 4 months. We used statistical analysis of the SHFA database to explore the possibility of comparing case-mix adjusted outcomes of care in different hospitals.

Methodology
16980 hip fracture patients admitted to 15 hospitals from 1 Jan 98 to 30 Jun 03 were documented in terms of age, sex, source of admission, ASA grade and pre-fracture mobility in the SHFA database. Logistic regression, survival analyses and classification tree methods were used to produce case-mix adjusted inter-hospital comparisons of mortality and return home by 30 days.

Results
Mortality at 4 months was 21%, with ASA grade, walking ability, living circumstances and age the most important case-mix factors. One hospital had significantly higher adjusted mortality than the average, with delay to surgery and DVT prophylaxis identified as areas of potential concern. 48% of the 9638 patients admitted from home were home by 30 days, with age, walking ability and ASA grade at admission as the most important case mix factors. Three hospitals had significantly lower adjusted return home rates than the average.

Conclusion
Statistical analysis of an audit database allows casemix-adjusted inter-hospital comparison of hip fracture care, and offers an additional resource in the improvement of clinical governance for this important injury.
ASSISTANCE ONLY CALLS FOR FALLERS BY NORTH EAST AMBULANCE SERVICE (NEAS).

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North East Ambulance Service1, Falls and Syncope Service2, RVI, Newcastle

Introduction
Current data suggests 35% of those over 65 fall annually. Those fallers who present to medical services are considered the ‘tip of the iceberg’. The true prevalence of community falls in older people who do not present to medical services is unclear. The BGS/AGS Falls guidelines recommend proactive identification of fallers.

Methodology
NEAS has operational boundaries from Northumberland to South Durham. Data was collated utilising existing NEAS data bank information to identify all assistance only calls to those over 65 who had fallen and did not subsequently require attendance at A&E.

Results
During nine months 1168 calls were attended by 999 ambulance crews to deal with uninjured patients that had fallen and who did not subsequently require attendance at A&E. Average time spent on scene by emergency crew was 27 mins. This equates to 527 hrs or 21 working days spent attending fallers who did not require further input other than lifting.

Conclusion
Many older people who fall utilise the 999 emergency ambulance service for assistance. Care alarms or ‘lifting teams’ may be more cost effective. Reducing the number of falls in the community will have major financial and operational benefits for NEAS. This cross-organisational initiative will now be used to identify fallers to local falls teams allowing early intervention to prevent recurrence.

EVALUATION OF A MODIFIED RISK ASSESSMENT TOOL (STRATIFY) TO PREDICT WHICH ELDERLY INPATIENTS IN A REHABILITATION WARD WILL FALL

J. WHITE, A. JOHANSEN
Department of Geriatric Medicine, University Hospital of Wales, Cardiff

Introduction
A STRATIFY (St Thomas’s Risk Assessment Tool in Falling elderly inpatients) score of ≥2 has a sensitivity of 93% for falling in an elderly acute medical ward. The purpose of this study was to evaluate how this assessment tool performs in a rehabilitation setting, and whether a simpler modified version of the tool would be as predictive.

Methodology
A STRATIFY and modified STRATIFY (using a single question in place of the two Barthel score elements) score was completed by key nurses for all 101 patients (mean age 82 years, female 66.3%) in a 4 warded rehabilitation hospital. Fall incidence was then monitored over the following 4 weeks.

Results
A STRATIFY score (range 0-5) was derived by scoring one point for each of five risk factors. At a cut off score of ≥2 the modified STRATIFY score appeared as effective as the original tool - higher sensitivity 69.6% (cf. 65.2%) albeit at slightly reduced specificity 56.6% (cf. 65.1%). 34.1% (23.6%-42.8%, 95% confidence intervals) of patients with a STRATIFY score of ≥2 fell compared with 30.8% (21.8%-37.7%, 95% confidence intervals) of patients with the modified STRATIFY tool.

Conclusion
Both tools were easy to use, but poor predictors of falls. The STRATIFY score only predicted 65.2% of fallers, reflecting a higher incidence of falls in this setting compared to the acute medical wards of the original study.
**BENIGN PAROXYSMAL POSITIONAL VERTIGO - A CURABLE CAUSE OF DIZZINESS**

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Falls and Syncope Service, Royal Victoria Infirmary and Regional ENT Service, Freeman Hospital, Newcastle, UK

**Introduction**

BPPV is a cause of dizziness that increases in prevalence with age, and is curable. Here we compare patients with BPPV referred initially to a Falls and Syncope Service (FSS) to those referred to an ENT unit.

**Methodology**

We identified dizzy patients referred directly to FSS with a diagnosis of BPPV confirmed by Hallpikes (FSS group) and patients diagnosed with BPPV initially referred to the ENT department (ENT group). Medical notes, investigations and outcomes were reviewed for all patients.

**Results**

59 subjects with BPPV were identified. 31 (53%) initially referred to the FSS (2.6 per month; 22 females (71%)). Prevalence of BPPV in subjects attending FSS - 6.2%. 28 were initially referred to ENT (47%)(24 (86%) female; 4.7 per month). FSS patients were older (mean (SEM) age 69 (2.4) years vs 55.4 (2.5); p=0.0003), dizzy symptoms had been present longer before diagnosis (mean (SEM) months 19 vs 11; p=0.0273). FSS patients had more than one type of dizziness (16% vs 0; p=0.001), were more likely to have cerebro- or cardiovascular co-morbidity (13% vs 4%; p=0.0152) and were taking more medications (3.2 vs 1.7; p=0.0271). 83% are cured with intervention if initially referred to FSS compared to 86% if referred to ENT.

**Conclusion**

BPPV is a curable cause for dizziness in older people. Older people are frequently referred directly to Falls units with BPPV. A high index of suspicion will allow early identification and treatment.

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**DIFFERING MOBILITY PATTERNS AND FALLS AMONG HOSPITAL IN-PATIENTS**

R. VIGNARAJA, M. VASSALLO, J.C. SHARMA, R. BRIGGS AND S.C. ALLEN

North Middlesex Hospital, London Royal Bournemouth Hospital, Bournemouth, Sherwood Forest Hospital, Mansfield and Southampton General Hospital, Southampton

**Introduction**

Gait and balance disturbance have been shown to predispose to falls. In this study by analysing gait patterns between fallers and nonfallers in hospital inpatients we have attempted to determine why some patients with unsafe gait fall and stratify their risks.

**Methodology**

In a prospective open observational study over a one year period 825 consecutive patients admitted to three rehabilitation wards were gait assessed using the 'get up and go test'. Other characteristics assessed on admission included previous history of falls, medications used, visual and hearing impairment, abnormal lower limbs and acute or chronic confusion. The outcomes measures recorded were number of fallers, total number of falls and patients sustaining injuries.

**Results**

Of the 825 patients studied 72.6% of patients were assessed as having an unsafe gait and 19.8% as safe with a normal gait and the rest unable to mobilise. When comparing fallers and nonfallers in patients with an unsafe gait, we identified a significantly higher proportion of presence of confusion (66.2% vs 34.1% p<0.0001) and previous history of falls (85.3% vs 73.8% p=0.008) in the fallers group.

**Conclusion**

The easily identifiable characteristics in clinical practice like the presence of confusion and a past history of falls identifies those patients with an unsafe gait who are most at risk of falls.
SCREENING AND ASSESSMENT OF POSTURAL STABILITY IN A FALLS CLINIC SETTING

J. WHITNEY, S.R LORI, J.C.T. CLOSE

King’s College Hospital, London and Powmri, Sydney, Australia

Introduction

The Timed Up and Go (TUAG) has been recommended as a simple screening tool to identify those at risk of falling and therefore likely to benefit from formal assessment and intervention (AGS/BGS Guidelines, 2001). The Physiological Profile Assessment (PPA) is a validated tool for quantifying risk of falling based on a composite of physiological measures—contrast sensitivity, lower limb strength, proprioception, postural sway and reaction time (Lord et al, 2003).

Methodology

100 consecutive falls clinic referrals underwent both the TUAG and PPA in addition to a simple test of cognition to determine how well the TUAG was able to predict risk of falling when compared to the more detailed PPA in a Falls Clinic population.

Results

Multiple linear regression revealed that TUAG and cognitive status were independent and significant predictors of PPA scores. These variables accounted for 22% of the variance in PPA scores (multiple R=0.47, p<0.001). The standardised beta weights were 0.42 for TUAG and -0.20 for cognitive status. ROC analysis indicated that 15 seconds in the TUAG was the optimal time period for identifying those with a marked risk of falling.

Conclusion

The TUAG and simple test of cognition can be used to streamline referrals in a high risk population, allowing for more efficient use of available resource in an everyday service context. A subsequent PPA offers formal quantification of risk and provides direction for tailored intervention.

PEPTIC ULCER DISEASE (PUD): AN AGEING PROBLEM?

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Rotherham General Hospitals NHS Trust, Rotherham

Introduction

We examined the profile of endoscopically proven PUD patients presenting to our centre (population 250 000) from 1977 to 2001, to assess changes in the nature of the disease.

Methodology

All patients with duodenal (DU) and gastric (GU) ulcer have been prospectively followed and detailed records kept.

Results

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<tbody>
<tr>
<td></td>
<td>DU</td>
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<td>1261</td>
<td>1056</td>
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<tr>
<td></td>
<td>GU</td>
<td>305</td>
<td>510</td>
<td>452</td>
<td>324</td>
<td>351</td>
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<tr>
<td>Presentation with haemorrhage (%)</td>
<td>DU</td>
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<td>12.4</td>
<td>17.1</td>
<td>16.7</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>GU</td>
<td>11.5</td>
<td>22.3</td>
<td>27.0</td>
<td>29.6</td>
<td>32.8</td>
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<tr>
<td>The effect of age</td>
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</tr>
<tr>
<td></td>
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<tr>
<td></td>
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<td>General Population</td>
<td>35.4y</td>
<td>36.3y</td>
<td>37.1y</td>
<td>37.7y</td>
<td>38.6y (2001)</td>
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<tr>
<td></td>
<td>The elderly (% ≥ 65 years)</td>
<td>DU</td>
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<td>20.9</td>
<td>31.1</td>
<td>30.8</td>
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<tr>
<td></td>
<td>GU</td>
<td>22.3</td>
<td>40.8</td>
<td>51.3</td>
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<td>General population</td>
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<td>12.9</td>
<td>14.1</td>
<td>14.9</td>
<td>15.6 (2001)</td>
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<td></td>
<td>Presentation with haemorrhage (%)</td>
<td>DU</td>
<td>12.1</td>
<td>24.0</td>
<td>30.8</td>
<td>25.4</td>
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<tr>
<td></td>
<td>GU</td>
<td>13.2</td>
<td>34.6</td>
<td>34.1</td>
<td>32.6</td>
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</table>

The mean age of PUD patients increased by 11 years compared to an increase of 3 years in the general population. Haemorrhage is increasingly common, more so in older people. More women are now affected (1977-81: DU 25%, GU 35%; 1997-01: DU 34%, GU 45%).

Conclusion

The rising age at presentation is consistent with the “birth-cohort effect” hypothesis: exposure to “environmental” risk factors has steadily decreased, so PUD takes longer to develop and presents later. Bleeding at presentation is related to rising age. NSAID or aspirin use may also contribute. The natural history of PUD is changing. Against a background of declining prevalence in the population, PUD today selectively affects the elderly.