

## Medical

**Title** Evaluating, improving and optimising the laboratory assessment of diabetes control in Irish hospitals

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### Introduction:

The Irish External Quality Assessment Scheme (IEQAS) is a national independent scheme for the objective assessment of analytical performance in Irish clinical laboratories. It is managed by a multidisciplinary steering committee representative of the four professional bodies in Irish laboratory medicine. IEQAS operates five sub-schemes.

The Diabetes Control and Complications Trial (DCCT; 1993) and the more recent UK Prospective Diabetes Study (UKPDS; 1998) have established a direct relationship between blood glucose control, as measured by HbA1c in the laboratory, and the risk of developing the renal, retinal and neurological complications of diabetes. In 1997, IEQAS commenced a detailed evaluation of the status of HbA1c measurement in Irish hospitals.

### Objective:

This study not only aims to evaluate, but also to improve and optimise, the laboratory assessment of diabetes control. A particular emphasis has been placed on the standard of performance required to support intensive management of diabetes. The study is patient-focused in that it strives to ensure comparable results between laboratories for the one blood specimen.

### Methodology:

Fifteen laboratories participate in this study. A volunteer donor panel formed in partnership with the Diabetes Federation of Ireland provides specimens. Each of these specimens is also assayed at a European DCCT Reference Laboratory. Results are analysed using IEQAS software programmes.

### Results:

The analytical quality of HbA1c results has improved in all participating hospitals over the period of the study. Analytical techniques, which performed poorly during the first year of the study, have been replaced. Method-related differences continue between ion-exchange chromatography, immunoassay and affinity chromatography.

### Conclusions:

The analytical performance of HbA1c assay needs to be improved further in a number of the participating hospitals. A day-to-day coefficient of variation of less than 3% is required to support intensive diabetes management.

IEQAS has embarked on a consultative process to set a national standard of analytical performance for the laboratory assessment of diabetes control. IEQAS is also in discussions with the International Federation for Clinical Chemistry (IFCC) regarding the alignment of Irish laboratories to the new IFCC Reference Method for HbA1c during the year 2001.

**Title:** Daycase laparoscopic cholecystectomy; the Limerick experience.

**Author:** Kiely, J.M., Brannigan, A.E., Foley, E., Cheema, T.S., O'Brien\*, W., Delaney, P.V. Department of Surgery and Anaesthesia\*, Limerick Regional Hospital.

**Introduction:**

Outpatient Laparoscopic Cholecystectomy was introduced in this unit in July 1999. The first 50 patients were prospectively evaluated up to February 2001.

**Objective:**

The aims of the study were to prospectively evaluate the feasibility and acceptability of Day Case Laparoscopic Cholecystectomy (DCLC) is a standard procedure for the management of symptomatic cholelithiasis in selected patients.

**Methodology:**

All patients were under 55 years of age with an ASA grade of I (n=48) or II (n=2). The mean age was 41 years (Range 20-55 years) and the M:F ratio was 1:4. All patients underwent DCLC using a standard anaesthetic protocol. Recording for demographic and laboratory data, operative findings and outcome were obtained. Patients recovered for eight hours and were discharged 10 to 12 hours postoperatively with a periforma which was reviewed at one week in the clinic. Patient satisfaction scores were then calculated.

**Results:**

The conversion rate to an open procedure was 2.5% (1 in 50). Of the 50 patients 4 required overnight admission due to excessive nausea hypotension, hypoglycaemia and one gentleman for an unforeseen social problem. 92% of patients were therefore available for same day discharge DCLC is acceptable to patients with a high rate of satisfaction (satisfaction score = 9.2 at day 1, 9.4 at day 2)

**Conclusion:**

In conclusion DCLC is feasible and safe in carefully selected patients and has the advantages of convenience and cost effectiveness without compromising safety or efficacy.

**Title:** Aminophylline/frusemide improves renal function in intensive care patients.

**Authors:** Kiely, J.M., Brannigan, Deegan, P\* A.E., Motherway, C., Grace, P.A.  
Depts. of Surgery <sup>and</sup> Anaesthesia\*, Mid-Western Regional Hospital, Limerick.

**Introduction:** Acute renal failure in ICU patients is associated with 50% mortality. Adenosine, a major factor in the pathogenesis of acute renal failure, acts via A1 (afferent arteriole vasoconstriction) and A2 (efferent vasodilatation) receptors. Adenosine antagonists should improve renal function.

**Objective:**

The objective of the study was to test the hypothesis that low dose continuous intravenous frusemide would reduce renal metabolic demand and would reverse renal impairment in ICU patients.

**Methodology:**

On diagnosis of renal impairment, an infusion of aminophylline/frusemide was commenced in ten haemodynamically stable patients.

**Results:**

The mean age was 71 years (Range 60-83), 80% were male and mean APACHE score was 16 (Range 11-31). Serum urea, creatinine and urinary output were measured at time 0, and daily until restoration of renal function, dialysis or death.

Eighty percent of patients responded. Maximum response occurred between days 1 and 7, median increase in urinary output being 2090 ml/24 hours (range 1293 to 2517). Median serum urea and creatinine changed from 9.2nmol/L (range 4.8-18) and 153 µmol/L (Range 59-245) to 10.3 umol/L (Range 6.2-25.3) and 121 µmol/L (Range 59-360) pre and post treatment respectively. Three patients died, 2 required dialysis and 5 made an uncomplicated recovery.

**Conclusions:**

In conclusion, aminophylline/frusemide may have a role in reversing renal impairment in ICU patients and may decrease mortality, furthermore, a prospective randomised control trial is warranted.

**Title:** An audit of the use of ACE inhibitors in cardiac failure in outpatients attending King's College Hospital

**Authors:** Ismail, F., Moore, A., Ogenlesu, A., Lyons, D., Pettingale, K., Swift, C.G., Jackson, S.H.D. Limerick Regional Hospital, Dooradoyle, Limerick.

**Introduction:**

ACE inhibitors have proven mortality benefits in patients with left ventricular systolic dysfunction (LVSD). Treatment with higher doses of ACE inhibitors has been shown to decrease hospitalisations and the incidence of new cardiovascular events compared to treatment with use of lower doses (1). However, many patients treated with ACE inhibitors remain on low doses because of concerns about potential adverse effects (2). We undertook this audit in order to examine how many patients with LVSD who had been prescribed an ACE inhibitor had dose escalation and to enhance practice by intervention.

**Methodology:**

A retrospective case note audit of outpatient attenders was carried out for the first loop of the audit cycle using pharmacy prescription records as a means of identifying relevant patients. A 3 month period of prescriptions was received. The second loop of the audit cycle was carried out in a prospective manner by keeping one copy of all outpatient dictated letters and identifying all relevant patients from these at the end of this second 3 month period of outpatient attendance. Clinicians prescribing for outpatients in our hospital received 2 circularised letters during the second period of audit reminding them that their prescription of ACE inhibitors was being audited.

**Results:**

18 patients (M:F-10:8; mean age 78) were obtained from the first cycle. Of these 5 were prescribed enalapril, 6 ramipril, 3 captopril, 3 perindopril and 1 lisinopril. 9 of the 18 patients (50%) had undergone dose escalation above the initiation dose, 4 out of the 18 patients (22%) were on maximal doses. The mean duration of ACE inhibitors therapy was 11 months. 2 of the 9 patients who remained on the initiation dose had documented adverse effects upon dose escalation. The rate of dose escalation was lowest in patients with NYHA class IV heart failure. In the second cycle, 38 patients were identified (mean age 76 years M:F-26:12). Of these patients 16 were prescribed enalapril, 4 ramipril, 3 captopril, 7 perindopril and 8 lisinopril. The mean duration of therapy was 19.6 months. Overall 32 of the 38 patients (84%) had some dose escalation. The highest rate of dose escalation between the two audits occurred in patients prescribed perindopril (7/10 patients). 13/38 patients (34.2%) were on the optimum dose and 19/38 patients (50%) were on intermediate dose. 6/38 patients (16%) were on the lowest dose. 2/6 patient (33%) who remained on the low dose had documented adverse effects upon escalating the dose. Echocardiography rates 67% and 63.1% were achieved for the first and second audit cycles respectively.

**Conclusions:**

Many patients with LVF particularly those with NYHA Class IV heart failure may be missing out on potential advantages because they do not have their ACE inhibitors dosage increased after commencing treatment with an initiation dose. As a result of our intervention to enhance the quality of prescribing dose escalation rose from 50% to 84% and the use of optimal dosage rose from 22% to 35%. Patients who have been prescribed ACE inhibitors with fewer dose

increments from starting to optimal dose appear to be more likely to undergo adequate dose escalation and achieve an optimal dose.

### **References:**

1. Packer M, Poole-Wilson PA, Armstrong PW [et al.] Comparative effects of low and high dose of the ACE inhibitors, lisinopril on morbidity and mortality in chronic heart failure. circulation. 1999 2312-2318
2. Houghton, A.R., Crowley, A.J., Why are angiotensin converting enzyme inhibitors under-utilised in the treatment of heart failure by general practitioners? Int J Cardiol 1997;59:7-10

**Title:** Large artery stiffness in old age, hypertension and stroke.

**Authors:** Hilton, D., Moore, A., O'Mara, G., Jackson\*, S.H.D., Swift\*, C.G., Lyons, D.  
Department of Medicine for the Elderly, Limerick Regional Hospital &  
\*King's College School of Medicine & Dentistry.

**Introduction:**

Increased large artery stiffness in old age results in both amplification and increased velocity of reflected pulse waves. The early arrival of amplified pulse wave reflections in systole, results in augmentation of systolic pressures and increases in both left ventricular work: perfusion ratios and in arterial shear stress. Increased arterial stiffness is therefore considered a potential predictor of cardio- and cerebrovascular disease. We report on a study comparing pulse wave characteristics of five patient groups – healthy young (HYV), healthy elderly (HEV), elderly with isolated systolic hypertension (ISH), “mixed” hypertension (MHT), and CT confirmed lacunar stroke (LAC).

**Methodology:**

Subjects were allocated to the above groups based on age, BP and CT brain data. The carotid pulse wave pressure profile was recorded using applanation tonometry. Pulse wave augmentation indices, which describe the proportion of the pulse pressure due to reflected pulse waves, were determined by averaging serial pressure profile data for each subject. Blood pressures were measured by a semi-automated sphygmomanometer (Omron 705CP)

**Results:**

Results with standard errors are displayed below (comparisons are by student's t- test)

	AGE (yr.)	BP (mmHg)	AUGMENTATION INDEX (%)
HYV (n=14)	27.0 (1.4)	131/72 (4/3)	-2.1 (5.2)
HEV (n=9)	77.8 (1.2)	132/76 (4/3)	23.7 (5.2)
ISH (n=8)	76.3 (3.8)	174/92 (8/3)	30.1 (5.1)
MHT (n=10)	70.4 (1.8)	161/98 (6/4)	31.5 (4.8)
LAC (n=6)	68.6 (2.5)	152/100 (7/4)	31.3 (7.9)

**Conclusion:**

Our data confirm that there is an increase pulse wave augmentation index in the elderly relative to the healthy young ( $p<0.001$ ) and suggests a trend towards increased augmentation indices in the hypertensive and lacunar stroke groups compared with healthy elderly ( $p<0.2$ )

There was no evidence of a difference in augmentation index between lacunar stroke patients and uncomplicated hypertensive patients or between the “mixed” and systolic hypertensive patients.

**Title:** Effects of abdominal aortic grafting on pulse wave reflections

**Authors:** Hilton, D., O'Mara, G., Moore, A., O'Keeffe\*, S., Burke\*, P., Grace\*, P., Lyons, D. Departments of Medicine for the Elderly, & \* Vascular Surgery Limerick Regional Hospital

**Introduction:**

Increased stiffness of the systemic arterial bed results in increased pulse wave velocity and earlier arrival of pulse wave reflections at the heart during systole, causing an increase in left ventricular systolic work and decreased diastolic left ventricular perfusion. We present the results of a study comparing the pulse wave augmentation index (a measure of systemic arterial stiffness) before and after abdominal aortic aneurysm repair (AAAR).

**Methodology:**

We measured the carotid pulse wave augmentation index, using an applanation tonometer (SphygmoCor) prior to and 8 weeks after AAAR. Blood pressures were recorded using a semi-automated sphygmomanometer (Omron 705CP). A total of 8 consecutive patients were studied of whom 2 were lost to follow up due to death (1) and unrelated terminal illness (1). One patient was excluded from the study due to preoperative spinal cord infarction, associated with evidence of altered peripheral autonomic activity. Data were analysed using the paired t-test. 2 tailed  $\alpha=0.05$ . Results are given as means with standard errors in brackets.

**Results:**

The mean age of the patients was 67 (5) years. The mean augmentation index was 146.5 (7.5) % preoperatively and 168.8 (12.9) % postoperatively ( $p=0.07$ ). The mean ratio of the postoperative to preoperative values was 1.154 (0.074). The pre-and postoperative blood pressures were 135/85 (7/4) and 143/83 (8/3), respectively ( $p=0.07$ , systolic;  $p=0.47$ , diastolic). The preoperative augmentation index values were similar to those from a series of subjects of similar age, without clinical evidence of aneurysm.

**Conclusion:**

We conclude that the synthetic abdominal aortic grafts currently in use alter pulse wave morphology and may increase the left ventricular work to perfusion ratio in a patient population at increased risk of coronary artery disease. Amplification of the systolic pressure may increase the risk of stroke. Currently, the potential role of pharmacotherapy or alternative graft materials in modifying pulse wave reflections in post-AAAR patients is undefined.

**Title:** Absence of a correlation between responses to carotid sinus massage and active tilting in fallers

**Authors:** Hilton, D., O'Mara, G., Moore, A., Clinch, D., Lyons, D.  
Department of Medicine for the Elderly Limerick Regional Hospital

**Introduction:**

Orthostatic hypotension and the carotid sinus syndrome are both important causes of transient cerebral hypoperfusion and falls in elderly patients. Although both conditions are thought to occur secondary to autonomic/baroreflex dysfunction their precise pathophysiology is poorly understood.

We present the results of a study comparing haemodynamic responses to carotid sinus massage (CSM) and active tilting in a consecutive series of patients referred for investigation of falls.

**Methodology:**

A part of a clinical fall investigation service we studied 298 consecutive patients (mean age 76 years). The haemodynamic responses to both active tilting from supine to 70 degrees head up tilt, and to carotid sinus massage performed in supine and semierect positions (right and left sided CSM), were measured. Recording and analysis of the continuous blood pressure profile was performed using digital volume clamp photoplethysmography (Portapres). Brachial blood pressure were recorded prior to plethysmography using a semiautomated sphygmomanometer (Omron 705CP) The responses to tilting or CSM were calculated as the percentage reduction in systolic and diastolic pressure from baseline (pre-stimulus) to the pressure nadir occurring within 30 seconds of the stimulus. The greatest percentage pressure reduction in response to CSM (of 4 measurements) was plotted versus the tilt response and tested for relationship using Pearson's correlation coefficient.

**Results:**

The sample included 167 patients with systolic BP reductions >20mmHg on tilting, of whom 58 were symptomatic. There were 31 patients with systolic BP reductions > 50mmHg after CSM (159 with responses > 20mmHg systolic). Coefficients of correlation for supine Vs semierect and for left Vs right sided CSM ranged from 0.56 to 0.7. The correlation coefficients for systolic Vs diastolic pressure responses to CSM and tilting ranged from 0.77 to 0.89. In contrast the correlation's between the haemodynamic responses to tilt and to carotid sinus massage were 0.06 (systolic response) and 0.11 (diastolic response)

**Conclusion:**

The proportion of patients in this sample that had significant responses to either tilt or CSM was high. Therefore the absence of a significant correlation between the responses to tilt and CSM suggests that these conditions are statistically independent and that their pathophysiologies may be unrelated.



**Title:** The carotid sinus syndrome is not associated with increased stiffness of the large arteries.

**Authors:** Hilton, D., Moore, A., O'Mara G., Clinch, D. and Lyons, D.  
Department of Medicine for the Elderly, Limerick Regional Hospital

**Introduction:**

The pathophysiology of the carotid sinus syndrome remains undefined. Previous investigators have hypothesised that the carotid sinus syndrome may be associated with increased arterial stiffness (1). We report the results of a study of the arterial pulse wave augmentation index (AIX; a measure of systemic arterial stiffness) in a series of patients with significant responses to carotid sinus massage (CSM), compared with patients without evidence of the carotid sinus syndrome.

**Methodology:**

Responses to CSM were measured using a Portapres model 2.0, the index measurement being the maximal reduction in systolic blood pressure (SBP) within 30 seconds of CSM. The AIX was measured using a SphygmoCor applanation tonometer at radial and carotid sites.

The results and group characteristics are displayed below.

MEAN (SEM)	TEST GROUP (N = 18)	CONTROL GROUP ( N = 19)
Age (years)	78 (1.3)	78 (1.3)
Mean BP (mmHg)	105 (3.3)	103 (4.5)
Height (cm)	160 (1.4)	165 (1.6)
SBP reduction post CSM (mmHg)	30 (2.4)	11 (0.8)
Augmentation Index (%)	33 (1.9)	29 (2.3)

**Conclusion:**

The results of this study do not support the existence of an increased augmentation index in patients with haemodynamic sensitivity to CSM. The most important potential confounding factors, age and mean blood pressure, are similar. Our data indicate that increased arterial stiffness is unlikely to be the pathophysiologic mechanism responsible for the carotid sinus syndrome.

**Reference:**

(1) O'Mahoney D. Pathophysiology of carotid sinus syndrome in elderly patients. Lancet, 1995;346:950-952

**Title:** The use of systemic vascular resistance measurement in the diagnosis of carotid sinus syndrome

**Authors:** Hilton, D., Moore, A., O'Mara, G., Costelloe, A., Sheehy, T., Clinch, D., Lyons, D. Clinical Age Assessment Unit, Dept. of Medicine for the Elderly, Limerick Regional Hospital.

**Introduction:**

The differentiation of the cardioinhibitory from the mixed form of the carotid sinus syndrome (CCS) requires further testing after atropinisation or pacemaker insertion. The pathophysiology of the CCS is undefined. We have hypothesised that the variability between CSS subtypes may be associated with peripheral  $\alpha$  and/or  $\beta$ - adrenoceptor dysfunction. We report on the potential application of a systemic vascular resistance (SVR) monitor in the differentiation of cardioinhibitory from mixed CCS.

**Methodology:**

We performed carotid sinus massage (CSM) on patients referred to the syncope laboratory and measured the response using a Portapres plethysmograph. The systolic blood pressure (SBP) and heart rate (HR) responses to CSM were used to allocate patients to "normal", vasodepressor and mixed/cardioinhibitory groups. The SVR of the mixed/cardioinhibitory group patients was derived and evaluated.

**Results:**

Mixed/cardioinhibitory responses were obtained in 58 patients. The mean maximal reductions in systolic and diastolic blood pressure after CSM were 39.4 (SEM 1.73) and 20.1 (SEM 0.76) mmHg respectively. Reductions in HR ranged from 10 to 46 beats/min (mean 20.4 beats/min). 32 patients had single phase reductions in SVR. In 26 patients the SVR trace showed an initial increase, followed by a reduction to below baseline in 19 of the 26 patients.

**Conclusion:**

Currently reinvestigation after atropinisation or pacing is required to differentiate between cardioinhibitory and mixed forms of carotid sinus syndrome. We propose that the use of SVR measurement techniques will facilitate subtype differentiation and pathophysiological investigation of this condition.

**Title:** Lower prevalence of pain associated with peptic ulcer disease in older patients.

**Authors:** Hilton, D., Moore, A., Iman\*, N., Burke\*, G.J., O'Mara, G.J., Lyons, D., Clinch, D.  
Department of Medicine for the Elderly/Gastroenterology\*, Limerick Regional Hospital

### **Introduction:**

Lower frequency of visceral pain age is increasingly recognised as a factor contributing to atypical or late presentation of disease. We report the concluding phase of a prospective study on presentation of peptic ulcer disease (PUD) in various age groups. The aim of the study was to compare the proportion of elderly patients with PUD who had abdominal pain with the proportion of younger patients with PUD who had pain.

### **Methodology:**

Prior to undergoing endoscopy patients of various ages were systematically questioned about their symptoms, and other factors including use of medications. All examinations were performed for specific indications as part of a routine endoscopy service.

### **Results:**

277 patients, 106 of whom had PUD, were included in the study proper and allocated to subgroups. Logistic regression analysis was used to compare the frequency of pain between age groups, adjusting for sex and Non Steroidal Anti-Inflammatory Drug use. Comparing the older group (mean age 70.9 years) with younger age group (mean age 33.9) years. There was a significant association of age with painless PUD ( $p=0.004$ ). Table 1 shows the considerable variation in the prevalence of pain in various sub-groups.

**TABLE 1**

Estimated Pain Prevalence %	Younger Age Group		Older Age Group	
	Male	Female	Male	Female
NSAID User	61.9	51.0	89.9	85.1
Non NSAID User	76.7	67.8	94.8	92.0

### **Conclusion:**

Absence of pain in upwards of 25% of older patients with PUD is confirmed in a prospective study. Confounding factors such as cognitive impairment have been outruled.

**Title:** Impact on a comprehensive assessment facility for the elderly on medical quality and hospital turnover outcomes.

**Authors:** Lyons, D., Costelloe, A., Sheehy, T., Mulcahy, N., Hilton, D., O'Mara, G., Moore, A., Groarke, E.P., Clinch, D.  
Department of Medicine for the Elderly, Limerick Regional Hospital

**Introduction:**

In 1998 a new type of facility, the Clinical Age Assessment Unit (C.A.A.U.) opened at this hospital. Located in the outpatients section of the main hospital it allows comprehensive and rapid assessment of the older patients in a favourable environment.

**Methodology:**

Facilities provided included Syncope Studies, Bone Densitometry, 24 hour ECG and BP monitoring in addition to the hospitals usual radiological and pathological service. It is staffed by two full time nurses with medical staffing consisting of four Consultant Geriatrician sessions and five trainee doctor sessions per week. During a nine-month period (September 1998 to May 1999) the workings of the unit were evaluated. 102 patients were diverted to the C.A.A.U. by their GP's as an alternative to admission through A&E. 1047 other outpatients attended with 946 in-patients using one or more of investigative modalities available.

**Results:**

We report that the patient activity ( $\geq 75$  years) for the years documented below. The C.A.A.U. commenced activity in January 1998.

**In-Patients Under Geriatricians**

YEAR	NO.	MEAN AGE (YEARS)	LENGTH OF STAY (DAYS)
1996	520	84.3	11.96
1997	1,388	82.2	8.49
1998	1,599	81.87	8.19

It is seen in table 1. that despite a 300% rise in the number of elderly patients under the care of the Geriatricians the average stay was reduced. During the same period the average length of stay for elderly patients (mean age 79.7 years) under all other Physicians either rose or remained static.

Of the 102 General Practitioners referrals for the hospital admission that were diverted to the C.A.A.U. 24 were admitted on the day. 9 were admitted during the following month with the remainder acute hospital admissions being avoided. Other aspects of the service were more difficult to quantify in the short term, for example, of the 639 DEXA scans performed, 235 demonstrated osteoporotic patterns requiring biphosphonate or hormone treatment. The impact of this and many other interventions in the C.A.A.U. can only be properly evaluated in a longer term study.

**Conclusion:**

Early indications are that comprehensive outpatient assessments facilities can provide major advances in qualitative and probably health economic aspects of medical care for the elderly.

**Title:** Prevalence of vitamin B12 deficiency in elderly patients with orthostatic hypotension

**Authors:** Moore, A., Coate, L., Watts, M., O'Mara, G., Pillay, I., Clinch, D., Lyons, D.

Clinical Age Assessment Unit, Dept. of Medical Gerontology,  
University of Limerick/Mid-Western Regional Hospital

**Introduction:**

Recently there have been a number of cases reported where patients with evidence of autonomic dysfunction including orthostatic hypotension (OH), who were vitamin B12 deficient had significant improvement in their autonomic function after vitamin B12 replacement (1). We carried out a retrospective study to examine the prevalence of B12 deficiency in older patients with OH.

**Methodology:**

We retrospectively audited all patients who had a diagnosis of OH made after undergoing tilt-table testing. A two-year period was audited. The clinical age assessment unit (CAAU) database was searched using the keyword of "orthostatic hypotension". A search of the haematology results was then carried out on all of these patients over the age of 70 in order to obtain their vitamin B12 level. Patients with a vitamin B12 level of <175 pmol/L were defined as vitamin B12 deficient.

**Results:**

480 patients with OH over the age of 70 were identified from the CAAU database. Vitamin B12 levels had been performed on 145 of these at the time of tilt-table testing (mean age 74.9). 21 patients (13.1%) had vitamin B12 deficiency (mean age 75.7 years). The mean vitamin B12 level in this group was 132.4pmol/L. Correlation coefficients between vitamin B12 levels and systolic (SBP) and diastolic blood (DBP) pressure changes and heart rate (HR) changes were calculated for all patients with a vitamin B12 level <220pmol/L. These were  $R = -0.146$ ,  $R = -0.06$  and  $R = -0.26$  for SBP, DBP and HR respectively.

**Conclusions:**

While our audit showed that vitamin B12 deficiency is common in older patients with OH there was a poor correlation between the extent of vitamin B12 deficiency and the extent of the change in SBP, DBP and HR. A prospective study is now underway to examine the haemodynamic changes associated with vitamin B12 deficiency on head up tilt testing and the subsequent effect of vitamin B12 replacement.

**Reference:**

(1) Turo, S., Yokota, T., Inaba, A., Autonomic dysfunction and orthostatic hypotension caused by vitamin B12 deficiency. *J Neurol Neurosurg Psychiatry* 66(6):804-5. 1999 June.

**Title:** Location of pain in elderly persons with peptic ulcer disease

**Authors:** Moore, A., Hilton, D, O'Mara, G., Clinch, D. Department of Medicine for the Elderly, Limerick Regional Hospital.

### **Introduction:**

A typical presentation of peptic ulcer disease (PUD) in the elderly is a contributory factor to the major mortality related to complications of PUD in this age group. We have previously reported that absence of pain in elderly persons with PUD is present in more than 25% of patients (i). We now report on the location of pain in both the older and younger age groups with PUD.

### **Methodology:**

Prior to undergoing endoscopy, patients of various ages were systematically questioned about their symptoms and completed an anatomically based template in order to show their perceived location of pain. All endoscopies were performed for specific indications as part of routine endoscopy service.

### **Results**

Two hundred and seventy seven patients, 106 of whom had PUD, were included in the study proper. Table 1 shows the distributions of pain in both age groups expressed as a percentage of the total number of PUD patients with pain.

**Table 1: Location of Pain When Present**

	<b>YOUNGER AGE GROUP</b>	<b>OLDER AGE GROUP</b>
Epigastric	43.3%	25%
Retrosternal	16.4%	16.6%
Combined areas of Epigastric/Retrosternal	10.4%	29.2%
Peri-umbilical	8.9%	4.16%

### **Conclusions:**

Comparing the older group (mean age 70.9 years) with the younger group (mean age group 33.6) older patients appeared less likely to clearly describe an epigastric location for their pain. They were more likely to report their pain as being diffusely present in both retrosternal and epigastric areas. Both of these differences were statistically significant. In addition to the tendency for pain to be absent in elderly PUD patients this inability in elderly patients to define the location of their pain, when present, may contribute to missed diagnosis of PUD in this age group.

### **References:**

1. Lower prevalence of pain associated with peptic ulcer in older patients. Moore, A., Hilton, D., Iman, N., Burke, G.J., O'Mara, G., Clinch, D. Ir J Med Sc. Vol 168, Suppl No.4, 1999.

**Title:** PFA-100® platelet function in stable angina patients – is there a subgroup of aspirin non-responders?

**Authors:** Crowe, B.H., Abass, S., Meany, B., Horgan, P., De Haan, J. and Cahill, M.R.  
Department of Haematology and Cardiology, Regional General Hospital, Dooradoyle, Limerick, Ireland. Dade Behring Marburg GMBH.

**Introduction:**

Patients with angina are at significantly increased risk of myocardial infarction. The anti-platelet agent Acetylsalicylic acid (ASA), known to prolong the *in vivo* bleeding time by the inhibition of platelet aggregation is of proven benefit in the prevention of further ischaemic events in this group of patients. Despite ASA therapy some patients will still suffer myocardial infarction. We investigated the effect of ASA on patients with stable angina using the *in vitro* whole blood platelet function test; PFA-100® (Dade Behring, Germany). We hypothesise that certain individuals taking ASA may have a demonstrable “non responsive phenotype” using this method.

**Methodology:**

Platelet function was measured as closure time (CT) using test cartridges with collagen and epinephrine (CEPI) or ADP (CADP). CEPI –CT is prolonged following ASA intake; the PFA-100® has been shown to detect aspirin induced effects 72 hours post ingestion. The ADP mediated closure time (CADP –CT) is essentially unaffected by aspirin. Closure time was measured in citrated venous whole blood from 31 patients with stable angina, symptom free for more than 7 days prior to sampling. All patients were on ASA medication ranging from 75mg daily to 300 mg on alternate days. This was compared with CT in a group of healthy volunteers (n=105) on no aspirin medication, and a subgroup of these volunteers (n=27) pre- and post aspirin therapy (75/300mg daily for 2 weeks).

**Results:**

The collagen / epinephrine mediated CT is significantly prolonged in the volunteer subgroup following aspirin ingestion {median (IQR): 257s (170-301) v's 141s (124-151); p=0.0000}; illustrating the aspirin sensitivity of this type of cartridge. The CADP –CT are not significantly affected {96s (87-110) v's 92s (84-102); p=0.15}. The reference range based upon 90% central interval (CI) of results (n=105); CEPI-CT: 85 –176 seconds; median 120s. Median CEPI-CT in the patient group: 205s. This was shorter than that observed with controls on aspirin therapy: 257s; 90% CI: 104 - 301s, and significantly longer than the reference range: 120s (p<0.01).

The CEPI-CT in the stable angina patients – all of whom were taking aspirin – showed prolongation in 58% (18/31) of the group when compared with the upper limit of the reference range. 42% (13/31) failed to show prolongation of the closure times.

When compared with the lower limit of the volunteer subgroup on aspirin, 29 % (9/31) of angina patients did not exhibit the expected prolongation of closure time.

**Conclusions:**

These findings demonstrate that patients with chronic stable angina, despite taking aspirin have a median CEPI – CT which is shorter than normal controls on ASA. In addition, a greater proportion of the CSA patients on ASA fail to demonstrate prolonged EPI induced bleeding time than normal controls. This finding – if replicated – is of considerable clinical and pharmacotherapeutic importance.



**Title:** Hyperactive platelets: shortened closure time (PFA-100®) after myocardial infarction.

**Authors:** Crowe, B.H., Abass, S., Meany, T.B., Fenton, A., De Haan J. and Cahill, M.R.  
Department of Haematology and Cardiology, Limerick Regional Hospital, Dooradoyle,  
Limerick, Ireland. Dade Behring Marburg GMBH.

### **Introduction:**

Platelets have a critical role in arterial thrombosis. Normally circulating in an inactive state they can undergo a succession of changes under thrombotic conditions, resulting in platelet activation and the formation of an occlusive plug. Measurement of the changes associated with activation is technically difficult. Non-manipulative assessment of platelets utilizing whole blood is preferred since it is more reflective of in vivo platelet function.

### **Methodology:**

We assessed in vitro whole blood platelet function using the PFA-100® (Dade Behring, Germany). This instrument measures the time (seconds) taken for citrated whole blood to occlude an aperture coated with collagen and ADP -the closure time (CT).

Closure time was measured in venous blood taken from 110 patients post myocardial infarction (MI)-70% within 96 hours of admission. All patients were on aspirin (75 - 300mg daily) when tested. This was compared with CT in a group of healthy volunteers (n=105) on no therapy, and a subgroup of these volunteers (n=26) pre and post- aspirin therapy (75 / 300mg daily).

### **Results:**

The ADP mediated CT in the MI group was significantly shorter when compared with the control group {median (IQR): 80 (66-94) v's 89 (82-102); p= 0.0005}.

The CT in the MI group was also significantly reduced when compared with ASA treated subgroup {80 (66-94) v's 96 (87-109); p<0.0005}.

There was no significant difference in closure times in the volunteer subgroup pre- and 2 weeks post ASA ingestion, when using collagen / ADP as agonists, illustrating the low aspirin sensitivity of this particular type of cartridge (p>0.1).

### **Conclusions:**

The PFA-100® closure time is significantly shorter in patients post myocardial infarction, -all of whom were on ASA therapy-, than in controls. Whether the PFA-100® closure time with collagen / ADP cartridges could function as an independent risk assessment for arterial thrombosis should be clarified in controlled follow-up studies.

## **Sylvester O'Halloran, Surgical Scientific Meeting – March 2001**

**Title:** Signal transduction via CD44 regulates CD44 variant isoform and  $\alpha 3$  integrin expression, and mmp-2 production

**Authors:** Morrin, M., Murray\*, D., McDonnell\* S., and Delaney, P.V.  
Colorectal Research Unit, Limerick Regional Hospital and University of Limerick; \*School of Biotechnology, Dublin City University.

### **Introduction:**

Tumour cell invasion is a complex process involving adhesion of tumour cells to the extracellular matrix (ECM), degradation of ECM components, tumour cell motility and detachment. Two of the critical components of this process are the tumour cell adhesion molecules and the matrix metalloproteinases (MMPs). Recent evidence suggests that these families of molecules may interact to control tumour cell migration and invasion, in particular the CD44 adhesion molecule and MMP-2/MMP-9. We wished to explore this process in colorectal tumour cell lines.

### **Objective:**

To investigate interactions between key molecules in tumour metastasis by crosslinking the CD44 adhesion molecule on the tumour cell and examining the resultant effects on CD44 variant expression, expression of other adhesion molecules ( $\alpha 3$  integrin and ICAM), production of MMPs and cell adhesion to ECM components.

### **Methodology:**

The colonic tumour cell lines SW480 and a genetically modified variant which expresses MMP-9, SW480-9, were used in the study. Cells were grown under standard conditions, +/- a CD44-specific antibody(F10-44-2) or a  $\alpha 1$  integrin-specific antibody. Cells were harvested and expression of CD44v6,  $\alpha 3$  integrin and ICAM measured using flow cytometry. Production of MMP-9 and MMP-2 was assessed using gelatin zymography. Adherence of tumour cells to ECM components hyaluronate, fibronectin and collagen was measured on microtitre plates.

### **Results:**

Cross-linking CD44 on the tumour cells (thereby mimicing adherence to specific ligand) resulted in downregulation of CD44v6 and ICAM on both SW480 and SW480-9.  $\alpha 3$  integrin expression was upregulated in SW480 but a decrease in expression seen in SW480-9. Complexing of  $\alpha 1$  integrin caused a downregulation of both  $\alpha 3$  integrin and ICAM. Crosslinking of CD44 did not affect MMP-9 production in SW480-9, but induced MMP-2 production in SW480. No major difference in adherence rates was observed between cells with crosslinked CD44 and controls, although the F10-44-2 antibody partially inhibited adherence to fibronectin and collagen.

### **Conclusions:**

It is no longer appropriate to consider these molecules as acting in isolation, as we have shown that activation of one adhesion molecule affects many other components involved in tumour invasion.

## **Surgical**

### **Title: Who needs a duplex scan?**

**Authors:** Ahmed, A.S., Foley, E., Decker, P.A., Burke, P. and Grace, P.A.  
Department of Vascular Surgery, Mid-Western Regional Hospital, Limerick

#### **Introduction:**

Duplex scanning has become an essential investigation in the diagnosis and management of carotid artery disease. However, an open-access policy for this investigation may be counter-productive. Many patients who do not have carotid disease are being scanned while those who do have carotid disease have to wait because the system is overloaded.

#### **Methodology:**

We compare the outcome of carotid duplex scanning performed on an unselected group of 928 patients referred for a variety of clinical indications. We tested the hypothesis that duplex scanning would not be of significant benefit in the management of those patients with ill-defined symptoms. The indications for carotid duplex scans performed over a 3-year period (1997-1999) were reviewed and divided into two groups: Definite carotid symptoms, (TIA, CVA, Amaurosis fugax, Dysphasia and Carotid bruit) and Non-carotid symptoms (dizziness, syncope, confusion, vertigo, seizures and other). We classified the patients on the basis of the duplex scan results. Patients with  $\geq 50\%$  stenosis were considered to have carotid disease warranting medical treatment while patients with  $\geq 80\%$  were possible surgical candidates.

#### **Results:**

	$\geq 50\%$ stenosis	$\geq 80\%$ stenosis	$> 50\%$ stenosis	$> 80\%$ stenosis
Carotid Symptoms (n=463)	109 (23.5%)	27 (5.8%)	354 (76.5%)	436 (94.2%)
Non-Carotid Symptoms (n=465)	62 (13.3%)	9 (2.0%)	403 (86.7%)	456 (98.0%)
Total (n=928)	171 (18.4%)	36 (3.9%)	757 (81.6%)	892 (96.1%)

The majority of patients were placed on antiplatelet therapy but only 25 patients (2.69%) came to carotid-endarterectomy.

#### **Conclusions:**

These data show that, regardless of symptoms, only 18% and 4% of patients referred for carotid duplex scanning will have a stenosis of  $\geq 50\%$  and  $\geq 80\%$ , respectively. However, patients referred with non-carotid symptoms have a negative predictive value of 86.7% and 98.0% for stenosis of  $\geq 50\%$  and  $\geq 80\%$ , respectively. We conclude that patients without definite carotid symptoms are of low priority for carotid duplex scanning.

#### **References:**

Holdworth, R.J., McCollom, P.T., Stonebridge, P.A., Bryce, J., Harrison, D.K. What are the indications for a carotid duplex scan? Clinical radiology (1996) 51, 801-803.

Kumar, S., Osman, I.S., Woolard, C.J., Cameron, A.E.P. 'Fast track' carotid duplex scanning in district general hospital. *Ann R Coll Surg Engl* 2000; 82: 167-170

**Title:** The effect of carvedilol and atenolol on lipid profiles in patients with essential hypertension.

**Authors:** Moore, A., Webster, J., Skinner, R., Petrie, J.C., Lyons, D.  
Clinical Age Assessment Unit, Limerick Regional Hospital/University of Limerick, Ireland and Department of Medicine, University of Aberdeen, UK

**Introduction:**

Carvedilol and atenolol are beta-adrenergic blocking drugs ( $\beta$ -blockers) which have been shown to provide considerable mortality benefit when used in patients with cardiac failure, hypertension and coronary artery disease. While the effect of administration of several commonly used  $\beta$ -blockers on serum lipid levels has been investigated, no published data on the effect of carvedilol on serum lipid levels exists.

**Objective:**

To study the effect of carvedilol on serum lipid and lipoprotein levels.

**Methodology:**

A double-blind parallel group study of the effect of carvedilol and atenolol on lipid profiles in patients with essential hypertension.

After a 4 week single blinded run-in period during which patients received a placebo matching carvedilol (25mg tablet) or atenolol (50mg tablet) 50 subjects were randomised to receive either carvedilol 25mg and 50mg atenolol placebo or 50mg atenolol and 25mg carvedilol placebo once daily for a period of 4 months. Fasting venous blood samples were obtained at weeks 0,4,8 and 16. Lipid and lipoprotein profiles were measured at each of these time intervals. Intention to treat analysis and on treatment analysis was carried out. Final analysis was carried out at week 20.

**Results:**

Decreased total cholesterol levels were noted for patients receiving carvedilol ( $-0.3\text{mmol/L}$  weeks 0-16) whilst a slight increase in total cholesterol ( $+0.2\text{mmol/L}$  weeks 0 to 16) was seen in patients taking atenolol. The differences between treatment groups did not reach statistical significance. No differences between each treatment group were noted for HDL cholesterol or HDL 2 cholesterol. A slight, but statistically significant difference in HDL 3 levels was noted at week 16 between the treatment groups. The 95% confidence interval indicates that this difference could be as much as  $0.2\text{mmol/L}$  in favour of carvedilol. There were no statistically significant differences between any of the other parameters studied.

**Conclusions:**

Carvedilol appears to have a slightly less adverse effect on serum lipid and lipoprotein levels when compared to atenolol, however, the differences between it and atenolol are the main not statistically significant. Concerns about  $\beta$ -blockers adversely affecting individual lipid profiles do not appear to outweigh their proven mortality and morbidity benefits in cardiovascular disease.

**Title:** Quality of life assessment and objective surgical outcome following pubovaginal sling for stress urinary incontinence.

**Authors:** Clyne, O., Nagubandi, R., Haradikar, V., Drumm, J., Flood, H.D.  
Department of Urology, Limerick Regional Hospital, Dooradoyle, Limerick.

**Introduction and Objectives:**

Stress urinary incontinence(SUI) is a common condition which has significant impact on quality of life. In many institutions the pubovaginal sling is now the standard treatment for SUI. We report the medium term results of pubovaginal sling in relation to the impact on patient quality of life and objective surgical outcome.

**Methodology:**

From July 1999 to October 2000 56 females, aged 17 to 69years underwent surgery for SUI. All data was accrued prospectively. All patients had urodynamically proven SUI. 2 patients had concomittant detrusor instability. The mean abdominal leak point pressure(ALPP) was 101cm of water. Quality of life was assessed using the SF-36 and King's Health Questionnaires

**Results:**

At 6 weeks all 56 patients were dry. At 6 months only 1/56 had recurrence of SUI. 6/56 patients reported urgency symptoms and of these 3 were commenced on anticholinergic therapy. Analysis of quality of life questionnaires completed preoperatively and postoperatively was carried out. Preoperative data was available on all 56 patients, 6 week data on 28 patients and 6 month data on 17 patients. Even as early as 6 weeks there was significant improvement in quality of life. In relation to physical functioning and degree of pain there was a statistically significant improvement with p values of 0.003 and 0.049 respectively. There was also a significant improvement in the categories of role limitation, physical/social limitations and emotional status.

**Conclusions:**

The Pubovaginal sling is effective, has low recurrence rates, low morbidity and has significant impact on quality of life.

**Presented:**

This abstract was presented at Irish Society of Urology Meeting 2001, at the 2001 Sylvester O'Halloran meeting and at the 2001 meeting of the British Association of Urological Surgeons.

**Title:** Changing practice in hypospadiology

**Authors:** O' Donovan, A., Gibbons, N., Clyne, O., Varadaraj, H., Nagubundi, R., Flood, H. D. Department of Urology, Mid-Western Regional Hospital, Dooradoyle, Limerick.

**Introduction:**

Snodgrass (J. Urol. 1994; 151: 464-465) first described the tubularised, incised plate urethroplasty for distal hypospadias in 1994. This involved the incising of the urethral plate down to Buck's fascia to attain the greater width necessary for tubularisation. In our study we evaluated the impact of the Snodgrass repair on our practice and the outcome of this procedure.

**Methodology:**

In our health region there are over 2000 male births per year. We audited our hypospadias practice from April 1996 to December 2000. Using patient charts we extracted data as regards procedure undertaken, age of the patient, length of stay and morbidity.

**Results:**

54 primary hypospadias repairs were carried out during the study period. Of these 31 (57%) were of a Snodgrass type. In total 16 patients (30%) were stented. Mean age at operation was 28.7 months (range 8 to 108 months) with a trend towards younger patients in the past two years (mean 16.3 months). 40 repairs (73%) were undertaken as day cases. In the remainder the average stay was 2.3 days (range 1 to 8 days). Six postoperative complications were seen including 3 fistulae (all repaired as a 1-stage procedures), 1 stent migration, 1 urethral diverticulum and 1 partial slough of a ventral flap. There was a successful secondary outcome in all cases.

<i>Position of meatus</i>	<i>Number of cases</i>	<i>Repair procedure</i>	<i>Number of cases</i>
Glanular	9	Snodgrass	31
Subcoronal	23	MAGPI	16
Distal penile	15	GAP	3
Midshaft	3	Mathieu	3
Penoscrotal	4	Duckett Onlay	1

**Conclusions:**

The snodgrass repair is a single-stage low morbidity technique applicable to virtually all levels of hypospadias. We have seen an increase in the usage of this procedure over our study period with a decreasing age at intervention and an increased number of day cases.

**Title:** General paediatric surgery – what does the future hold?

**Authors:** O' Donovan, A., Varadaraj, H., Flood, H., Delaney, P., Drumm, J., Grace, P. A.  
Departments of General Surgery and Urology, Mid-Western Regional Hospital,  
Dooradoyle, Limerick.

**Introduction:**

At the present time general surgeons in Great Britain and Ireland are providing a general paediatric surgical service in regions without a specialist paediatric surgery unit.

**Objective:**

Our aim was to review the provision of this service in the Mid-Western health region in the Republic of Ireland and to predict the future of general paediatric surgery in the region.

**Methodology:**

Over the period January 1995 to January 2000 the general paediatric surgical workload in the Mid-Western Regional Hospital was audited. Using operative logbooks, patient charts and the HIPE system, data was extracted with regards to the operation performed, the operator, the nature of the operation and the mortality and morbidity. Figures were obtained for the yearly birth rate to predict future trends.

**Results:**

2353 paediatric operations were carried out under the departments of general surgery and urology. 813 other paediatric surgical patients were treated conservatively. Over the period there was an increase in the percentage of day cases (55% to 70%) and the percentage with a consultant as the main operator (40% to 67%). There was no mortality and less than 1% morbidity. Only 40 patients required transfer to a specialist unit. During our study period the birth rate increased by over 700 births per year (3301 to 4024).

**Conclusions:**

At present general paediatric surgery is adequately provided for the region by appropriately trained general surgeons. However with a decreasing number of general surgeons receiving appropriate paediatric surgery experience and an expected rise in our paediatric population we are facing a crisis in the provision of this service. Increased numbers of specialist paediatric surgeons or a change in general surgical training is required.



## **\*Winner of Sir Patrick Dunne Gold Medal, 2001.**

**Title:** Osteoporosis and orthostatic hypotension - a common pathogenic mechanism?

**Authors:** Pillay, I., Hilton, D., O Mara, G., Sword, J.E., Clinch, D., Lyons, D.  
Limerick Regional Hospital, Dooradoyle, Limerick.

### **Objective:**

To establish an association between orthostatic hypotension and bone mineral density.

### **Introduction:**

Osteoporosis and orthostatic hypotension in combination substantially increases fracture risk. The postmenopausal reduction in oestrogen is associated with both a decline in bone mineral density and with a loss of Nitric Oxide(NO) - mediated endothelial function with an associated rise in blood pressure, predisposing to orthostatic hypotension. The age-associated decline in NO-mediated blood flow could reduce skeletal muscle perfusion - thus reducing the shear effects of muscle on bone, which are necessary for the maintenance of bony integrity. We hypothesise that the postmenopausal reduction in NO-mediated endothelial function may serve as a common pathogenic link between the development of postmenopausal osteoporosis and orthostatic hypotension. We report on a case-control study where eight patients with, and eight patients without severe orthostatic hypotension (OH), matched for age and body mass index, underwent DEXA scanning at lumbar vertebrae and hip.

### **Methodology:**

Diagnosis of OH was made using active head-up tilt with the portapres model 2 (TNO Amsterdam) which measures phasic blood pressure and heart rate with each beat of the heart and BMD was measured using a Lunar DX Pro scanner. Results were analysed using the Wilcoxon Sign Rank test. The mean (SD) age for the OH and control groups were 77.4 and 77.1 years respectively, (2.91 and 2.29). Mean body mass index for the OH and control groups were 23.51 and 23.49 respectively (2.91 and 2.29). Reductions in systolic blood pressures (SBP) on active head-up tilt in the OH group and control groups were mean 52.4mmHg(9.7) and mean -0.6mmHg(1.69), $p=0.01$  respectively.

### **Results:**

The BMD (g/dl) measured at the hip was significantly lower in the OH group [0.63 (0.18) V 0.91(0.12); $p=0.017$ ]. The BMD (g/dl) measured at L2-L4 showed no significant difference [0.94(0.25) V 0.92(0.19); $p=0.67$ ]. There was a significant positive correlation between the change in SBP and BMD measured at the hip for both groups ( $R=0.616$ ).

### **Conclusions:**

We conclude that there was a significant reduction in BMD of the hip of patients with OH. BMD was non-significantly greater over the lumbar spine in patients with OH probably due to the presence of established osteoporotic fractures and which is the principal reason for using hip BMD for the diagnosis of osteoporosis in old age. Our data support the hypothesis that OH and osteoporosis have a common aetiological basis.

### **Further research activity from the above research:**

A HRB grant has been applied for to look at the relationship between endothelial function, skeletal muscle strength and bone mineral density in pre- and postmenopausal women and in both sexes over the age of 65 years.

### **Presented:**

Irish Gerontological Society, September 2000, platform presentation by Dr I Pillay.

## **Nursing**

### **Abstract – Book Publication**

**Author:** Power, S. Principal Tutor, Regional School of Mental Health Nursing, St. Joseph's Hospital, Limerick

**Title:** **Nursing supervision: a guide for clinical practice**  
**Sage Publications (London) 1999.**

### **Introduction**

The practice of clinical supervision in nursing is becoming increasingly well-regarded as a tool to self-monitor clinical performance and raise standards of care by student and registered nurses alike. Although its practice is not yet widespread in Ireland, there are areas of the country where interest in its development is growing rapidly. Stephen Power, from St. Joseph's Hospital, Limerick has recently published a book - which has received some acclaim in the UK press – offering practical guideline for implementation of the practice.

### **Overview**

Addressing the practicalities of clinical supervision in nursing, this book follows the course of the supervision process, illustrating each stage with information, academic theory, anecdotal material, serious comment and thought provoking exercises.

Emphasis is placed on the purpose and value of clinical supervision, but also on the potential pitfalls those involved may encounter and how they can be avoided. A number of theories are discussed and the author offers his own model of clinical supervision, adapted to nursing from an original psychoanalytic model used for therapists, counsellors and social workers.

### **Abridged Content**

Nurses and supervision – Myths, Trouble and Misconceptions

What is the point of Clinical Supervision?

Communicating in Clinical Supervision

The First Session – And Getting Beyond It!

Finding A Solution By Knowing How To Look for The Problem

Power, Persecution and Game-Playing

Group Work

Endings in Clinical Supervision

**Title:** Public health nurses views on strategies to promote breastfeeding and a proposed agenda for Co. Clare.

**Author:** O'Brien, A. Public Health Nurse, Health Centre, Kilrush, Co. Clare.

**Introduction:**

This project is about Public Health Nurses views on strategies to promote Breastfeeding and a proposed agenda for Co. Clare. Co. Clare has a population of 94,000 and an annual birth rate of 1200-1400.

**Objective:**

The objective of the study is to increase Breastfeeding levels in line with recommendations in the National Breast feeding policy of 1994.

- ◆ An overall Breastfeeding initiation rate of 25% by 1996 and 50% by 2000.
- ◆ A Breastfeeding initiation rate of 20% among lower socio economic group by 1996 and 30% by 2000.
- ◆ A Breastfeeding rate of 30% at 4/12 by 2000.

The department of Public Health within the Mid-Western Health Board undertook a major survey on infant feeding in 1997. It identified the following rates in Co. Clare.

<i>Commenced Breastfeeding</i>	<i>45.7%</i>
Breastfeed on discharge	40.7%
Breastfeed at 2/52	35.8%
Breastfeed at 6/52	33.8%
Breastfeed at 4/12	22.2%
Breastfeed at 6/12	13.6%

It is evident from these figures that we fall short of the targets set out in the National Breastfeeding Policy in Ireland in 1994. In developing a more comprehensive and proactive policy and particularly in the context of seeking to mobilise resources and support, it is useful to outline the rationale for such an undertaking – in other words why promote Breastfeeding?

An increase in exclusive Breastfeeding prevalence can substantially reduce mortality and morbidity rates among infants. Estimates of the cost and impact of three Breastfeeding programmes, implemented through maternity services in Honduras, Brazil and Mexico showed that Breastfeeding promotion can be one of the most effective interventions for preventing cases of diarrhoea and gaining disability adjusted life years (Health Policy Plan 1996). Hortons, Sanghvit, Philips, M. Fielder. J, the difference in morbidity between Breastfeed and formula fed infants has been well established in both affluent and poorer situations according to (Becker G. Keller C.)

Less otitis media

“upper respiratory disease

“insulin dependant diabetes

“atopic eczema

“sudden infant death

“food allergies

**Methodology:**

Data was collected utilising a questionnaire developed by the writer specifically for the purpose of the study. A descriptive and quantitative approach was utilised. All P.H.N.'s in Co. Clare were invited to participate in the study. Response rate 98%, n=28.

**Results:**

96% of respondents has participated in an 18-hour Breastfeeding Management course. 4% of respondents indicated they had attended study days. 7% had trained as Lactation Consultants. 96% of P.H.N.'s indicated they would rate frequent visitation as a first preference in encouraging mothers to Breastfeed.

4% would refer mothers to a support group as a second preference.

Six different strategies were listed and nurses were asked to comment if they felt these strategies were feasible or if they felt there would be barriers to implementing them.

**Establishing Liaison with Practice Nurses, GP's and Obstetricians**

22% felt there would be barriers

78% felt it would be feasible

**Breast Feeding Supports Groups**

42% felt there would be barriers

58% felt it would be feasible

**Public Promotion, Media, Clare F.M.**

91% felt there would be barriers

78% felt it would be feasible

**Public Promotion National Breastfeeding Policy**

22% felt there would be barriers

78% felt it would be feasible

**Heightening Public Awareness**

11% felt there would be barriers

98% felt it would be feasible

**Annual Breastfeeding Seminar**

100% felt it would be feasible

**Conclusion:**

There had been a high input of resource by the M.W.H.B. into education, particularly the 18 hours Breastfeeding Management Course.

- ◆ Public Health Nurses in Co. Clare very committed to increasingly levels of Breastfeeding.
- ◆ There was a great deal of support for an annual Breastfeeding Seminar
- ◆ 7% of total respondents had qualified as International Lactation Consultants, this is a valuable resource to Breastfeeding and this expertise should be maximised.

It is evident from my research that a high level of commitment has been made by the M.W.H.B. in the area of training and education. This has not been harnessed and developed so as to materialise in an effective service delivery. The knowledge and expertise is available but a deficit exists in the translation into positive action. There is an obvious lack of co-ordination in the approach in service delivery and the void should be filled through the appointment of a co-ordinator to focus on delivery implementation.

The key function of the co-ordinator would be to develop and implement a strategic policy, which takes account of National recommendations and local policy initiatives while the strategy is in place. It is clear Breastfeeding is not done by one activity. It is a cumulative effect of objectives from several different disciplines that finally show up in the strategies as an increase in Breastfeeding (Mc Clean HM)

## **Personal and Social Services**

**Title:** Management of suicide in post-primary schools: an evaluation of the mid-west region.

**Authors:** Begley, M. & O'Sullivan, M. Suicide Strategy Project, Mid-Western Health Board.

### **Introduction:**

Suicide among youths has increased ten fold over the last ten years. In 1998, 504 individuals died by suicide in Ireland. Of this total, 27% (138) were in the 15-24 years age group. Against this background, teachers are considered a key group for developing local management strategies for suicide deaths in the post-primary school sector. In 1997, the Association of Secondary Teachers, Ireland, (ASTI) published general management guidelines for sudden unexpected death of students. This study sought to evaluate current practice and knowledge levels in order to develop locally driven management protocols amongst teachers in the Mid-West region.

### **Methodology:**

A questionnaire was designed to evaluate current prevention and post-vention practice, including teacher training needs. Forty five questionnaires were distributed to Career Guidance teachers in all public schools, who facilitated the completion of the questionnaire.

Of the 45 schools surveyed, 58% responded. Only 29% of schools follow a written protocol for dealing with sudden death. Furthermore, 58% of teachers are unfamiliar with statutory and voluntary organisations offering help in their region. Almost three quarters of teachers (73%) are unable to identify an "at risk" student. In general, no formal bereavement support structures are offered to students, teachers or parents. Teachers requested specific resource materials and training, in self-esteem, problem solving and communication skills. Finally, teachers expressed a need for detailed guidelines in dealing with sudden death in schools.

### **Conclusions:**

Formal, locally-devised school protocols for the management of sudden death is imperative. There is also a need to establish regular school links with the voluntary and statutory services. In order to ensure a partnership approach in dealing with the issues, further discussions and working committees need to be established.

### **Presented:**

Career Guidance Teachers Workshop, Limerick, November, 1999.

**Title:** Developing the “Chain of Survival” in an Irish Rural setting

**Author:** Callaghan, P. Regional Ambulance Communications Centre, Dooradoyle, Limerick.

**Introduction:**

The chain of survival is a sequence of elements that must be in place in order to optimise the possibility of survival for patients in cardiac arrest. This sequence of elements is as follows:

1. Early access to emergency medical services
2. Early cardio-pulmonary resuscitation (CPR)
3. Early defibrillation
4. Advanced cardiac life support (ACLS) (Cummins et al 1991)

**Objectives:**

The main aim of the investigation was to examine the general practitioner contribution to the “Chain of Survival” in County Clare in order to:

- Identify the level of training amongst general practitioners in the context of the “Chain of Survival”.
- Identify the level of interest amongst general practitioners in improving their level of skill in the context of the “Chain of Survival”
- Make recommendations

**Results**

Population Size	50
Response Rate	35 (70%)

➤ **General Practitioner Demographics**

Single-handed Practice	24 (69%)
Group Practice	11 (31%)
Practices with a practice nurse	22 (63%)
Average number of GMS patients per practice	699 (Range 0 to 1,600)
Average number of private patients per practice	1,330 (Range 30 to 5,000)
Average increase in patient population when on call	5,507 (Range 500 to 13,000)
Average length of time since primary qualification	21 years (Range 5 to 39)

➤ **Immediate access to Basic life and advanced life support equipment**

Item	Yes	No
Bag, valve and mask	23 (66%)	12 (34%)
Oro-pharyngeal ( <i>Guedel</i> ) airways	26 (74%)	9 (26%)
Oxygen administration equipment	14 (40%)	21 (60%)
A cardiac defibrillator	2 (6%)	33 (94%)
Cardiac resuscitation drugs	21 (60%)	14 (40%)
Endotracheal intubation equipment	8 (23%)	26 (74%)*
Equipment to gain intravenous access	26 (74%)	9 (26%)
I.V. cannulation and giving sets		

- (1 (3%) unknown)

➤ **Training Received**

Trained In	Yes	When?	No	Since 1990
CPR	All	1970 -1990	N/A	23 (66%)
Bag, valve & mask	28 (80%)	1970 -1999	7 (20%)	22 (63%)
Oro-pharyngeal airway	28 (80%)	1970 -1999	7 (20%)	21 (60%)
Oxygen therapy	26 (74%)	1969 -1999	9 (26%)	19 (54%)
Cardiac defibrillation	30 (86%)	1970 -1999	5 (14%)	19 (54%)
Cardiac resuscitation drugs	30 (86%)	1970 -1999	5 (14%)	22 (63%)
Endotracheal intubation	28 (80%)	1970 -1999	7 (20%)	21 (60%)
Intravenous access	25 (71%)	1980 -1999	10 (29%)	19 (54%)

➤ **Interest in Future training**

Subject	Yes	No
CPR training	30 (86%)	5 (14%)
Bag, valve and mask training	28 (80%)	7 (20%)
Oro-pharyngeal ( <i>Guedel</i> ) airway training	29 (83%)	6 (17%)
Oxygen therapy training	28 (80%)	7 (20%)
Cardiac defibrillation training	32 (91%)	3 (9%)*
Endotracheal intubation training	27 (77%)	8 (23%)
Intravenous access training	25 (71%)	10 (29%)

\*( 1 (3%) unknown)

**Conclusions:**

- The additional patient population covered by general practitioners when on call is significant. This indicates the need to integrate the services already in place and to find new ways of delivering appropriate pre-hospital emergency care to the community.
- The average length of time since primary qualifications is twenty one years. This and the fact that 51% of general practitioners have qualified in the last twenty years would seem to put over 50% of general practitioners in an age bracket where they are likely to be interested in change and innovation in delivering service. This conclusion is supported by the fact that 82% (range 71% to 91%) of respondents indicated their interest in future training in the range of skills enquired about.
- It would appear reasonable to conclude that the probability of success with any training development with general practitioners is high due to the 82% (average) positive response to interest in future training and to the fact that on average 49% of general practitioners had immediate access to relevant equipment. Also supporting this conclusion is that an average 82% of general practitioners had received training to date across the range of skills inquired about.

**Recommendations:**

A two level training structure is required. Training in basic resuscitation skills should be offered to the minority with no previous training. The majority should be offered regular opportunities to update their skills. Training programmes should be tailored to the expressed needs of participants.

The requirements for resuscitation equipment need to be assessed in detail and deficiencies addressed. A programme of structured servicing and maintenance of equipment is needed.



**Title:** Female Sex Workers and the GU/STD Clinic

**Author:** Clancy, J. A/Sr. GU/STD Clinic, Regional Hospital, Dooradoyle, Limerick

**Introduction:**

In the six month period Jan '99 to June '99 we saw 222 new female patients at our clinic. In that period it appeared that no female sex workers attended the clinic. My research was confined to female sex workers and the emphasis was on establishing the knowledge of sexually transmitted infections (STI's) amongst the sex workers, and examining the reasons for their non-attendance.

**Methodology:**

- Desk research in two forms, literature review and conference attendance.
- Discussions on the topic with interested groups and professionals working in the field e.g. social services, gardai, health projects in Limerick and Dublin.
- A series of informal visits to the outdoor "sex work areas" of the city interviewing the female workers.

**Results:**

- Desk research indicated the need for persistence and patience in approaching sex workers.
- This was borne out by the fact that it took multiple contacts to establish trust and interest on behalf of the sex workers.
- In total I carried out 28 visits and met nine individuals. No attempt was made to visit brothels or contact male sex workers.
- The level of knowledge of STI's among the group contacted was minimal and they saw clinic services as not relevant to their needs. They complained of lack of privacy at the clinic.
- A serious alcohol and to a lesser extent drug abuse problem is evident in those I met.
- Persistence in the outreach approach did yield some results as one worker availed of our services and a second is showing more interest.

**Conclusions:**

When approached professionally and persistently sex workers will avail of the services of the GU/STD clinic. However resources need to be made available to attract them in e.g. Outreach Worker, and if/when they visit we need to consider how to best process this group. There may be a need for a variety of methods of service delivery in order to reach as many as possible and a convenient drop in centre may be an option to be considered.

**Title:** Writing to patients: a qualitative study

**Authors:** O' Reilly, M., Dept. Epidemiology & Public Health, UCC., Cahill, M., Limerick Regional Hospital, Dooradoyle, Limerick. Perry, I., Dept Epidemiology & Public Health, UCC.

**Objectives:**

To explore consultant, general practitioner and patient attitudes towards the proposal that consultants could send outpatients a written summary of their consultation, with a copy to referring GP.

**Introduction:**

Efforts to improve doctor-patient communications have included the use of written materials to supplement the verbal information provided to patients in the medical consultation. Providing patients with a detailed letter summarising their outpatient consultation has been highlighted in recent studies to be of value to patients (Essex, 1998; Hallowell, 1998).

**Methodology:**

Qualitative study based on tape recorded in-depth interviews with a purposive sample of 20 consultants, 16 patients and 12 general practitioners. Interview transcripts were content analysed to identify key themes and attitudes.

**Results:**

Marked differences were apparent in medical professional and patient perspectives with patients broadly welcoming the proposal that consultants could write directly to patients and medical professionals in the main expressing reservations about the proposal. The dominant medical professional concern was the inability of patients to comprehend and cope with medical information in the written letter coupled with an inevitable compromise of the quality of information provided to GP's in standard clinic letters. Patients highlighted the likely beneficial effect of the proposed letter on recall of the consultation and discussion with family and GP's. Some asserted their rights to receive such a letter.

**Conclusion:**

There is a disparity in medical and patient opinion on this proposal of consultants writing directly to patients. This reflects deeper differences in perception and expectations regarding communication between doctors and patients.

**Further research activity from the above research:**

This research is part of a wider ongoing study *'Talking to Patients-Writing to Patients'*, which is primarily concerned with doctor-patient communications in outpatient departments, with particular emphasis on the proposal that consultants could provide patients with a written summary of their out-patient consultation. The study has been conducted in three phases, employing both qualitative and quantitative methodologies. Phase one consisted of the series of in-depth interviews reported in this abstract. Data from these interviews informed a large scale questionnaire (phase two) which was administered to 400 general practitioners, 200 patients and 150 consultants across two Health Board Regions. Phase three of the research consists of a randomised controlled trial to assess the feasibility, acceptability and effectiveness of a consultant writing to patients and is currently in progress. Study participants are randomly assigned to receive either, a short letter thanking them for attending the clinic, with a standard letter to the general practitioner or a letter summarising the consultation, including the main problems and decisions made in the course of the consultation, with a copy to the general practitioner. Both patient and general practitioner receive a copy of the same letter. To date, 112 patients have been successfully recruited to the RCT.

**Presented:**

UCC Health Services Research Conference, 'Taking Stock and Moving Forward' September 1999- oral presentation Máire O' Reilly

Haematology Association of Ireland Annual Meeting, October, 2000 – oral presentation Dr. Mary Cahill.

Society for Social Medicine (UK) September 2000 – poster presentation Máire O' Reilly

**Title:** Writing to patients: effectiveness, feasibility and acceptability.

**Authors:** O'Reilly, M., Dept. Epidemiology & Public Health, UCC Cahill, M., Limerick Regional Hospital. Perry, I., Dept Epidemiology & Public Health, UCC.

**Objectives:** To evaluate the effectiveness, feasibility and acceptability of a letter from a consultant to an outpatient, summarising the outpatient consultation, with a copy to the referring GP or other professional as appropriate.

**Introduction:**

The provision of patient summary letters to outpatient attenders has been shown in recent work to be of value to patients.

**Methodology:**

A randomised controlled trial involving 112 consecutive referrals to haematology outpatients, of whom 59 were randomised to receive a letter summarising the consultation, with a copy to their GP and 53 controls who received a note thanking them for attending the clinic with a standard letter to their GP. Intervention patients and controls are assessed for recall, compliance and satisfaction using a standardised structured interview. Referring GP's/consultants opinions of the use of summary letters are also sought. 43 intervention group and 48 control group patients have been assessed.

Questionnaires have been administered to 68 referring GP's/consultants to ascertain their views, with a response from 38, non-responders are being followed-up. The participating consultant retains a record of time taken to dictate letters, patient or GP contact, if any, relating to the summary letter and how any additional information (if any) to the GP is dealt with.

**Results:**

Data are currently available on (i) satisfaction with the summary letter from 43 intervention patients who have returned for their second visit to outpatients, (ii) feasibility of letter in terms of impact on consultant time (data based on 59 letters), (iii) GP/consultant views of summary letters in practice. 92% of the intervention group were 'very pleased' or 'pleased' to receive a written summary of their consultation and 90% considered the letter as 'very useful' or 'useful'. 60% indicated that they understood all of the summary letter, 35% understood 'most but not all' and 5% understood 'very little'. Strongly positive views on the summary letter were expressed by patients during interview, reflecting high satisfaction rates. The average time taken to dictate the patient summary letter was 6.8 minutes, range 3 to 15 minutes. 39% of surveyed GP's/consultants considered the summary letter to be 'very useful' for the patients, 46% considered it to be 'somewhat useful', while 15% considered the letter to be 'useless'. Almost one third (30%) would be concerned if such letters were to become routine practice and almost two thirds (62%) felt that the quality of information in the summary was different to the usual clinic letter.

**Conclusions:**

Letters from consultants to patients summarising key elements from the clinical encounter are feasible and enhance quality of care.

**Presented:** Haematology Association of Ireland Annual Meeting, October, 2000 – poster presentation Dr. Mary Cahill

## Clinical services

**Title:** Episodes of care (EoC) approach to clinical record keeping.

**Author:** McAvinchey, D. General Hospital, Nenagh, Co. Tipperary.

### Introduction:

A clinical database was designed and installed to track patients presenting with breast symptoms. Each new referral to the breast clinic at the Mid-Western Regional Hospital and Nenagh hospitals is entered as the initiating event in an EoC. Every subsequent transaction is recorded as an “*encounter*” related to that EoC.

### Methodology:

A retrospective review of all breast cancer cases at the Mid-Western Regional Hospital, St. Johns, Nenagh and Ennis was conducted for 1999 and 2000, using the same concept of EoC.

### Results:

**995** of **1787** new referrals (**56%**) with breast symptoms were entered as a new EoC.

**654** had only 1 encounter.

**139** patients with breast cancer had **532** encounters recorded (average 3.8 encounters per cancer patient, range 1 to 12)

These included initial assessment, biopsy, x-ray, surgery, chemotherapy, radiotherapy, nurse interview and follow up visits.

### Comment:

EoC allows an analysis of activity for a defined clinical problem over time. The beginning and end of an EoC can be defined for different clinical predicaments, in this instance new breast symptoms. Further refinement of the software and easier access at each stage of the patient’s course will improve data acquisition and reliability. A gradual introduction into normal work practice and immediate product, such as the doctor’s letter, real-time reports, and prescriptions will improve performance.

The advantages of an EoC approach include the following. The data model and associated definitions are capable of providing better comparisons of outcome measures and costs than are possible on currently available datasets. Each type of encounter can be costed and summated for cost analysis. Resource planning based on costing and anticipated activity is possible. Effectiveness of treatment and outcome can be recorded over time. Specialist characteristics for the particular disease can be included in the design. The generic structure of the database can be used in different clinical settings.

Forward planning and systems analysis is required to incorporate EoC into the standard clinical record for all of the clinical specialties.

## Research in progress

**Title:** Monitoring of parasuicide study in the MWHB region

**Contacts:** Begley, M., St. Joseph's Hospital, Limerick, Murphy, C., RDU, St. Camillus' Hospital, Limerick.

### **Brief Description:**

This study is being carried out in conjunction with the National Suicide Research Foundation. The aim is to establish the frequency and characteristics of patients referred to A&E because of acts of parasuicide in the MWHB. A monitoring form is completed on every case of parasuicide presenting for treatment to A&E in Limerick Regional, Nenagh General, Ennis General and St. John's Hospitals. Parasuicides treated solely by prison personnel in Limerick Prison are also included in the study.

This study is also being carried out in the SHB and discussions are underway to extend it nationally.

Start date: 1<sup>st</sup> July 1995  
Longitudinal Study

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**Title:** Preliminary findings from a pilot study on a crisis research project (C.R.P.) in the Clare mental health services

**Author:** Clancy, M., Staff Nurse, Our Lady's Hospital, Ennis, Co. Clare

### **Introduction:**

The Crisis Research Project (C.R.P.) commenced in Clare and Limerick on 30.08.1999.

### **Objective:**

The main aims of the (C.R.P.) are to provide an effective nursing assessment of each individual who contacts the psychiatric services when the Sector Day Hospitals close. The project is also research based, all contacts and outcomes are recorded for each individual.

We report on the main findings presented at an audit meeting on 18/12/1999

### **Methodology:**

All contacts (directly or indirectly, via telephone) were analysed from individual records and a computerised scan between the 30.08.1999 and 30.11.1999. The total number of contacts in this period was 124. Data analysis the type of contact and outcome of such contact.

### **Results:**

A total of 124 contacts were identified. Contacts involved counselling, nursing assessment, addiction assessment and family sessions.

Of the 124 contacts the number admitted was 46.7%. 33.9% were referred to the Day Hospital. 9.7% were telephone contacts, 6.5% were referred to the General Practitioner. 1.6% were referred to Ennis General Hospital and 1.6% were inappropriate referrals.

**Discussion:**

After each assessment the aim is to provide a comprehensive outpatient service when it is safe and considered in the patients best interest, in preference to hospitalisation. 53.3% of the 124 contacts were referred to the appropriate services.

Preliminary data has increased our awareness of the need for crisis intervention to meet the psychological and social needs of patients who contact the service. The project is also concerned with completing a detailed history so that meaningful information may be assessed through the computerised patient system by the multi-disciplinary team in the relevant sector area.

**Presented:**

Preliminary results from the pilot phase of this study were presented at an audit meeting in Our Lady's Hospital, Ennis on 08/12/1999.

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**Title:**                **Assessment of the risk of violence at the time of psychiatric hospitalisation.**

**Author:**           **Clancy, M., Our Lady's Hospital, Ennis and Department of Applied Psychology, University College Cork.**

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**Title:**                **Hyperhomocysteinaemia and response to bisphosphonate therapy in patients with osteoporosis.**

**Authors:**          **Pillay, I., Molloy, E., Mulloy, M., Lyons, D.  
Clinical Age Assessment Unit, Limerick Regional Hospital.  
Department of Rheumatology, Cork University Hospital.**

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**Background:**

Bisphosphonates are frequently used in the treatment of osteoporosis. They retard the progression of bone loss and reduce the fracture rate. Their mode of action has not been fully elucidated but involves the promotion of osteoclast apoptosis. However, there is a proportion of patients, thought to be 5-10%, who fail to respond to bisphosphonates, i.e. they continue to suffer bone loss despite compliance with therapy. The reasons for this have not yet been elucidated, but a recent *in vitro* study has led to a compelling hypothesis.

It has been shown that homocysteine can partly inhibit bisphosphonate-induced osteoclast apoptosis *in vitro*. The reason for this is unclear but may be due to a number of processes. Homocysteine is metabolised to S-adenosylhomocysteine, which affects transmethylation reactions. This may eventually lead to increased susceptibility of hypomethylated DNA to degradation by nucleases. Homocysteine may also interfere with the function of microfilaments or thirdly may directly affect the cytoskeleton.<sup>1</sup>



We hypothesise that hyperhomocysteinaemia diminishes the efficacy of bisphosphonates *in vivo*. We propose to evaluate this hypothesis by identifying patients with osteoporosis who are non-responders to bisphosphonates and measuring their fasting plasma homocysteine levels.

**Study Design:**

We will identify all patients who have undergone repeat Dual Energy Xray Absorptiometry (DEXA) scans, to monitor response to therapy. Those who have a reduction in bone mineral density despite compliance with bisphosphonate therapy will be included in the study. Asking the patient directly will assess compliance with therapy. Fasting plasma homocysteine levels will then be measured on all patients who demonstrate a reduction in bone mineral density after two years treatment with bisphosphonates.

**Expected result:**

That non- responders to bisphosphonate therapy will have high mean fasting plasma homocysteine levels.

**Significance of findings:**

The inference will be that patients with moderate hyperhomocysteinaemia\* will have a reduced response to bisphosphonate therapy.

\*Moderate hyperhomocysteinaemia will be defined as greater than or equal to 12 micromol/L.

Ms. Ann Breen, Senior Lab Technician, Biochemistry Department, Limerick Regional Hospital will do the fasting plasma homocysteine levels.

We hope to have results available by the end of May.

**Future projects:**

If there is a mean hyperhomocysteinaemia in the non-responders (i.e. >12micromol/L), we intend to set up an intervention trial with folic acid whilst continuing bisphosphonate therapy and monitor response.

In addition, a case control study will be undertaken to look at people who *have* responded to bisphosphonate therapy. Their mean fasting plasma homocysteine levels can also be measured. We would hope to find a lower mean fasting plasma homocysteine level in this group.

<sup>1</sup>Characteristics of clodronate-induced apoptosis in osteoclasts and macrophages.

Selander KS, Monkkonen J, Karhukorpi EK, Harkonen P, Hannuniemi R, Vaananen HK  
*Mol Pharmacol* 1996 Nov; 50(5): 1127-38

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**Title:** Bone mineral density and long-term nitrate therapy

**Authors:** Pillay, I., Reynolds, B., Ryan, J., O Mara, G., Moore, A., Sheehy, T., Costelloe, A., Watts, M., Clinch, D., Lyons, D.  
Department of Medicine for the Elderly, Limerick Regional Hospital.

**Proposal:**

We propose to undertake a case-control study using the database in the clinical age assessment unit. We will identify all men who have been on IMDUR (long acting nitrate) for a period of three or more years. Compliance will be checked with their general practitioners. All of these men will then be invited to attend for Dual Energy Xray Absorptiometry (DEXA) scanning, to have their bone mineral density quantified. A control group, not on nitrates, matched for age, sex, level of physical activity and body mass index (BMI) will be found by searching the database.

*Exclusion criteria*

Patients with a diagnosis of major trauma, bone, colon or lung carcinoma, multiple myeloma, metastatic disease, coeliac disease or pathological fractures will be excluded. Patients who were also on a bisphosphonate, calcitonin, vitamin D, calcium, steroids, anti-convulsants, eltroxin will also be excluded.

**Expected outcome:**

Previous unpublished work has shown that patients on nitrates have reduced muscle strength. We would expect to find a reduction in bone mineral density in this group of patients who are taking long-term nitrates.

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**Title:** MWHB staff training: suicide assessment and management in every day practice

**Author:** Begley, M. St. Joseph's Hospital, Limerick.

**Description:**

In order that relevant and useful bi-annual training can be arranged, a questionnaire has been distributed to staff working in A&E and the Mental Health Services, with a view to establishing their training needs. Respondents to-date see the need for a multi-disciplinary, day-long workshop where suicide assessment tools, risk indicators and information on support services are provided.

**Start date:** November 1999

Some questionnaires yet to be distributed to some nurses in the mental health services

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**Title:** A study to evaluate proposed day care centres for older people in Co. Clare

**Authors:** O'Sullivan, M., McNulty, S., Greally, T., Public Health Dept. and Home Help Working Group in Clare.

**Description:**

An Evaluation Study of Day Centres for Older People was conducted in two areas of Co. Clare, i.e. Miltown Malbay and Clarecastle. The study design involves two stages. The first stage assessed potential attendee's attitudes towards the Day Care Centre. In addition, baseline measurements of their mental and physical health, overall quality of life, and use of other health care services was recorded. The second stage, yet to be carried out, includes follow-up assessments within six months of the opening of the Centre, to re-evaluate how this service has impacted on attendee's lives. A random representative sample of all people aged 75 years or over were interviewed in their own homes by Mary O'Sullivan.

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**Title:** Patient satisfaction questionnaire in Kilmallock day hospital

**Authors:** Sector E Team (Falahee, B., Nursing Officer, Kirwan, P., Consultant Psychiatrist)

**Brief Description:**

The study aims to carry out a patient satisfaction questionnaire on patients currently attending Kilmallock Day Hospital. A total of 125 questionnaires have been completed and input onto the statistical package SPSS for analysis.

**Dates:** Commenced in 1999. Analysis currently being carried out.

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**Title:** Audit of the speech and language service in MWHB

**Authors:** Senior Speech & Language Therapists, Murphy, C.A., O'Farrell, C., Burke, M. Mid-Western Health Board.

**Brief Description:**

An audit of the Speech and Language Service was conducted in the period July 1997 to June 1998.

**Dates:** Commenced in 1997. Analysis of findings currently underway.