

National Institute of Health Sciences Research Bulletin

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- Assessment of Biocompatibility of an Acellular Scaffold Derived from Porcine Urinary Bladder Membrane Utilizing L 929 in a Novel Bioreactor

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If you wish to contribute to future editions of this publication, please contact:

The National Institute of Health Sciences
St. Camillus Hospital
Shelbourne Road
Limerick

t: 061-483975
f: 061-326670
e: info@nihs.ie
w: www.nihs.ie

National Institute of Health Sciences (NIHS)

ABOUT THE NIHS

The NIHS represents a strategic alliance between the Health Service Executive (HSE) and the University of Limerick (UL).

The primary goal of the NIHS is to advance and support high quality health-related research and to promote evidence-based healthcare delivery. This is achieved through advanced education, access to and dissemination of information and the fostering of partnerships between educational organisations, the healthcare service and the private sector where appropriate.

GUIDE TO GOOD RESEARCH PRACTICE

In order to provide more practical support to health researchers in the region the NIHS has produced a "Guide to Good Research Practice" which is supplied as a supplement to this issue of the Research Bulletin. This guide outlines in step-by-step fashion the key aspects of conducting health research and the pitfalls to avoid. This guide is supported by the provision of up-to-date texts in the Regional Medical Library and will shortly be available on the NIHS website along with several other useful documents providing advice on conducting health research.



Cover of Guide to Good Research Practice



HSE Libraries Online

HSE LIBRARIES ONLINE

- Do you need information for your clinical practice?
- Are you studying for further qualifications or engaged in a research project?
- Do you need help to find the right information?

In May 2006 Professor Drumm launched two major online resources for HSE staff – HSE Libraries Online and the Digital Archive of Irish healthcare information.

HSE Libraries Online www.hselibrary.ie is the first national electronic library and information service to be set up in Ireland which is designed for healthcare staff working within the HSE.

The two main aims of this website project are:

1. To provide a single point of access to electronic journals and databases
2. To provide access to the Digital Archive of Irish healthcare information

The website was developed to provide high quality, value for money, co-ordinated library and information services for all HSE staff, thereby enhancing patient and consumer care.

Key information resources available on www.hselibrary.ie include:

- Fulltext electronic journals
- Databases of journal articles
- Irish Health Publications Archive
- A Directory of HSE Libraries

HSE Libraries Online provides 24/7 access from work or home and also acts as a contact point for a Digital Archive of Irish Health Information which may be accessed from any computer with Internet access.

The Irish Health Publications Digital Archive is a collection of Irish Health publications including former area boards, Department of Health and Children and current HSE publications. The documents are all available in PDF format.

Access to the majority of these resources is free for all e-Library users. Many of the electronic journals and some of the electronic and databases require an ATHENS password, which is available to all staff working or training with the Health Service Executive.

HSE staff should register online at www.hselibrary.ie or at your local HSE library for an Athens password.

It is envisaged that the range of resources available will be extended and developed over the coming months and years to provide comprehensive subject coverage to reflect the commitment of the HSE to supply high quality, evidence based information to all staff at the point of care.

For more information log on to www.hselibrary.ie or contact your local HSE Library.



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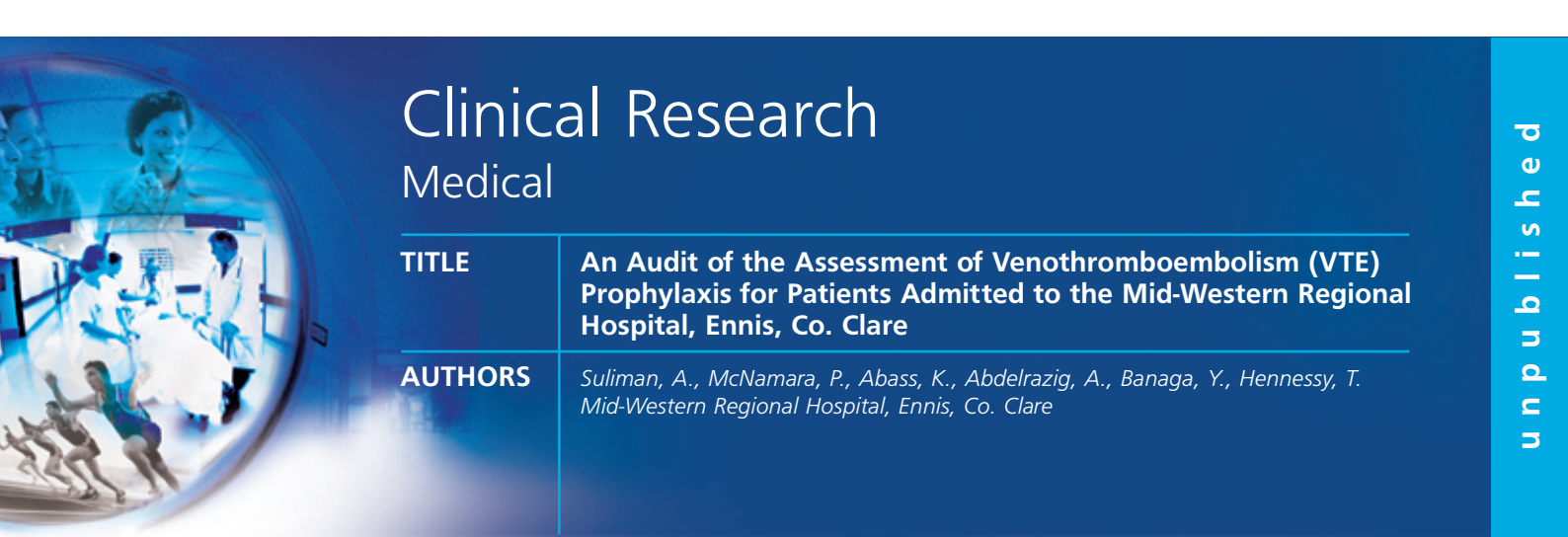
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Clinical Research

Medical

TITLE	An Audit of the Assessment of Venothromboembolism (VTE) Prophylaxis for Patients Admitted to the Mid-Western Regional Hospital, Ennis, Co. Clare
AUTHORS	Suliman, A., McNamara, P., Abass, K., Abdelrazig, A., Banaga, Y., Hennessy, T. Mid-Western Regional Hospital, Ennis, Co. Clare

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INTRODUCTION

Venothromboembolism (VTE), deep vein thrombosis of the lower limb (DVT) and pulmonary embolism (PE) are a common cause of morbidity and mortality. They are a preventable cause of death in hospitalized patients. Recent controlled trials suggest that antithrombotic prophylaxis in appropriate people at increased risk of thrombosis, not only reduces disability and mortality, but is also a cost-effective therapy in selected, high-risk patients. An audit was performed to determine (1) the frequency of medical inpatients receiving VTE prophylaxis, (2) whether patient’s risk of VTE was well assessed, (3) whether contraindications to VTE prophylaxis were documented.

METHODOLOGY

A retrospective review was performed on 100 patients admitted to medical wards in the Mid-Western Regional Hospital, Ennis, Co. Clare in 2005-’06 with high risk for VTE (e.g. age more than 75 years, malignancy, immobility for 3 days or more, congestive cardiac failure, obesity, recent surgery, previous VTE).

RESULTS

Of 100 patients reviewed age ranged from 26-94 years, only 32 (32%) patients were assessed for risk of VTE, 9 patients (9%) received enoxaparin (clexane) 40mg s/c o.d, 3 patients (3%) received Tinzaparin (Innohep) 3,500 units s/c o.d, 30 patients (30%) were taking aspirin 75mg o.d, 6 patients (6%) on clopidogrel 75mg o.d, and 20 patients (20%) were already on warfarin. Mechanical VTE prophylaxis (anti-embolic stockings and intermittent pneumatic compression) was not used. Only 2 patients (2%) have hypersensitivity to thromboprophylaxis, 13 patients (13%) have bleeding or potentially bleeding problems.

Table 1 - Thromboprophylaxis Treatment Taken Total No.100

	No. Received	% Received
TED stockings	0	0%
Enoxaparin (Clexane)	9	9%
Tinzaparin (Innohep)	3	3%
Aspirin	30	30%
Warfarin	20	20%
Clopidogrel	6	6%
No Action Taken	33	33%



Figure 1 - Thromboprophylaxis Treatment Taken Total No. 100

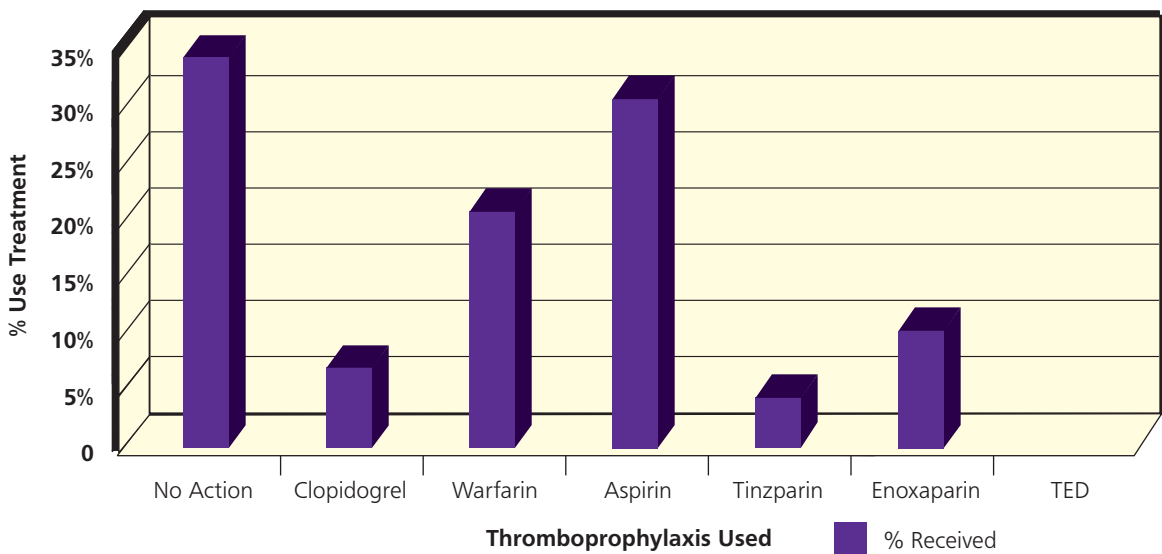


Table 2 - VTE Risk Assessed and Documented within 24 hrs of Admission Total No. 100

Assessed	%	Not assessed	%
32	32%	68	68%

Figure 2 - VTE Risk Assessed and Documented within 24 Hrs of Admission Total No. 100

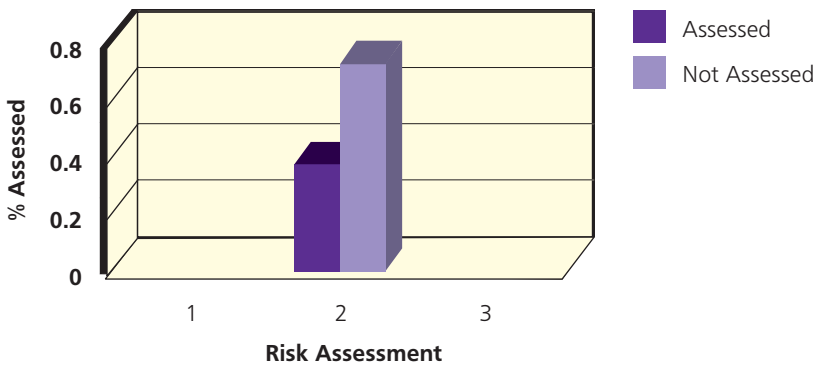




Table 3 - Documentation of Contraindication to Thromboprophylaxis

Cause of contraindication	No.	%
Hypersensitivity	2	2%
Bleeding or potentially bleeding	13	13%

CONCLUSIONS

Less than one third of the patients had their VTE risk assessed and clearly documented in their notes. VTE prophylaxis was under utilized as only one third received proper VTE prophylaxis. Mechanical VTE prophylaxis was never used.

RECOMMENDATIONS

To increase awareness for assessment and documentation of risks of VTE. To increase utilization of anticoagulant for VTE prophylaxis weighing risk of VTE against risk of major bleeding. Utilization of mechanical VTE prophylaxis, especially when anticoagulants are contraindicated. These measures help to reduce morbidity and mortality from VTE.

ACKNOWLEDGEMENTS

The authors wish to acknowledge the assistance of Ms. Edel Quinn, Sanofi Aventis medical representative.

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Clinical Research

Medical

TITLE	Audit on Non-Invasive Ventilation in a District General Hospital
AUTHORS	<i>Hussain, M., Stephens, N., Power, J. Department of Medicine, Naas General Hospital, Co. Kildare</i>

INTRODUCTION

Non-invasive ventilation (NIV) has been shown to be an effective treatment for acute hypercapnic respiratory failure (AHRF) particularly in chronic obstructive pulmonary diseases (COPD). Facilities for NIV should be available 24 hours a day in all hospitals likely to admit such patients.¹ NIV service is relatively new in Ireland and at present is not widely available outside the few teaching hospitals. NIV service has been established in Naas General Hospital (NGH) for the last few years and a protocol has already been drawn up successfully to ensure its safe and effective use.

OBJECTIVE

The aim of this audit is to observe the current practice of NIV and to identify any deviation from the protocol which would need further attention for improvement.

METHODOLOGY

Consecutive patients requiring NIV from January 2004 to September 2005 in NGH were collected retrospectively from the registry book of the respiratory department. Patients' details were collected by the respiratory specialist nurse from individual case notes and incorporated into a questionnaire prepared by using the BTS NIV audit tool 2002. Relevant data were transferred into the spreadsheet of Excel, Microsoft ME 2000 for further analysis.

RESULTS

A total of 50 episodes from 44 patients were recorded during the 21 month period. There were 36 male and 14 female episodes. Mean age was 67 years (range 23-88). Of these, 40 episodes were due to COPD and others were due to aspiration pneumonia, obesity with hypoventilation, neuromuscular disability, cardiogenic pulmonary oedema etc. The majority of patients (98%, 49 episodes) had arterial blood gas (ABG) analysis on admission. Mean PH before NIV treatment was 7.17 (range 7.13-7.5). On the contrary only 60% (30 episodes) and 50% (25 episodes) had ABG at 1-2 hours and 4-6 hours respectively. The majority, 70% (35 episodes) did not have any ABG before discharge. Only 44% had recorded decision of next action if NIV fails. On the outcome measures, 76% patients improved but 20% did not find any benefit from NIV. Overall only 12% had ICU admission and 8 patients died. Total length of hospital stay was 1,361 days (27days/episode) and of these only 6.25% of time was spent in ICU.



CONCLUSION

NIV is new to most of the temporary medical staff of NGH. There is a hospital protocol in place for guidance but on many occasions substantial deviations have been observed at all levels undermining the potential benefit of this important treatment which needs further attention.

REFERENCE

1. BTS Guideline, Non-invasive ventilation in acute respiratory failure. Thorax. 2002;57:192-211.

PRESENTED

At an Audit Meeting in Naas General Hospital in May 2006 by Ms. Noleen Stephens.



Clinical Research

Medical

TITLE	An Audit of the Reporting and Treatment of Pressure Ulcers in the Mid-Western Regional Hospital, Ennis, Co. Clare
AUTHORS	<i>McNamara P., Liddy, D. Clinical Audit Department, Surgical and Medical Wards, Mid-Western Regional Hospital, Ennis, Co. Clare</i>

INTRODUCTION

Pressure Ulcers can be very complex, with many starting out as seemingly innocuous areas of redness on a patient's skin. If left unrecognized or untreated, they can deteriorate into deep, hard to treat, chronic wounds that undermine the patient's health and quality of life.

OBJECTIVE

Recent observational studies suggest that the prevalence of pressure ulcers in acute hospital settings varies from 8% - 22% (Clark et al., 2004). The prevalence of documented pressure ulcers (N=104) in our acute hospital setting during the timeframe of this 12 month audit was 2% (5,405 admissions). Therefore, it is of paramount importance that patients who are deemed to be at risk are assessed and then receive preventative care. If a patient has a pressure ulcer then the treatment they receive should prevent further damage and also aid in the healing process.

METHODOLOGY

A retrospective review was carried out on 104 patients admitted to the Mid-Western Regional Hospital, Ennis, Co. Clare in the twelve month period from November 2004. Data collection occurred over four months from January to April 2006. The population consisted of patients at high risk for Pressure Ulcer or who currently had a Pressure Ulcer. A Pressure Ulcer Assessment Tool which assessed risk upon admission to hospital had been compiled for the nurses to utilize during patient assessment. National and International Guidelines have been produced on the topic of pressure ulcer prevention and management (NICE, 2001) and these were the measures utilized for this audit.

RESULTS

Of the 104 patients reviewed, (aged from 47 – 100), 100% of them had an initial and ongoing assessment of risk done. An initial and ongoing Pressure Ulcer Assessment was done on 100% of the 104 patients. Grading of the Pressure Ulcer using the European Pressure Ulcer Advisory Panel (EPUAP) Grading scale was only recorded 71% of the time. Only 1% of Pressure Ulcers graded 2 or above were documented as a clinical incident. 98% of patients who were thought to be vulnerable to Pressure Ulcers were as a minimum placed on a high specification foam mattress. 100% of the patients were closely observed for skin changes.

Only 10% of patients with a grade 3 – 4 pressure ulcer were placed on a high specification foam mattress with an alternating pressure overlay or a continuous low pressure system. 81% had the optimum wound healing environment created by using modern dressings.



CONCLUSION

All of the patients (100%) had their Pressure Ulcer risk assessed initially and on an ongoing basis. Use of the established grading scales was under utilized as only 71% had a grade of ulcer documented on the report form. Also, documentation of Pressure Ulcers as a clinical incident was only done once. Use of modern dressings could be increased as well as utilizing the best alternating pressure mattresses available.

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2. National Institute of Clinical Excellence (NICE) Inherited Clinical Guideline B. Pressure ulcer risk assessment and prevention. London: National Institute for Clinical Excellence; 2001.
3. European Pressure Ulcer Advisory Panel (EPUAP). Pressure Ulcer Treatment Guidelines; 2005.



Clinical Research

Medical

TITLE	Are there Changes in Usual Activities in Patients following a Cardiac Event?
AUTHORS	<i>Cantwell, A Department of Cardiac Rehabilitation, Mid-Western Regional Hospital, Nenagh, Co. Tipperary</i>

INTRODUCTION

Cardiac Rehabilitation plays an important role in optimizing patients' functioning, enhancing quality of life, minimizing the risk of recurrent events and facilitating resumption of usual activities.¹ Measuring outcomes after a cardiac event is essential to determine efficacy of treatment and rehabilitation for patients with coronary heart disease.

RATIONALE

Resuming usual activities after a cardiac event is an important aspect of the recovery and rehabilitation of the cardiac patient.

METHODOLOGY

This study was a small convenience sample (n=41) from a single cardiac rehabilitation department over a six month period. Data collection was by means of a researcher administered patient questionnaire at the time of their cardiac event and at three months following their cardiac event. This study measured patients' perceptions of their functional capacity and compared work, domestic and leisure activities before and at three months after their cardiac event. The Dukes Activity Status Index (DASI) was used to measure functional status at both data collection time points. A risk factor assessment was included to evaluate health behaviour changes.

RESULTS

The findings of this study suggest that there are changes in usual activities after a cardiac event. At three months after a cardiac event the participants' functional status was reduced from a mean of 34.8 (Pre) to a mean of 27.5 (Post). The number of participants in full time employment had decreased by 39.3%. All participants had resumed driving and light housework and only 23.7% of participants had resumed heavy housework. There was an increase in the number of participants engaging in mild (14.3%) and moderate (4.9%) intensity physical activity. Sexual activity showed a modest drop of 2.5%. The majority of participants (82.9%) reported positive health behaviour changes. These changes included walking regularly, smoking cessation and dietary changes.



CONCLUSIONS

This study revealed a significant reduction ($p < 0.0005$) in functional status after a cardiac event. Increasing age had a negative effect on functional status as had concomitant illness. The study revealed an association between participation in Phase II education sessions and health behaviour changes. This finding supports existing literature that reports cardiac rehabilitation as a facilitator for health behaviour change. However, it should be noted that this study was conducted in the absence of a Phase III cardiac rehabilitation programme. In order to provide an equitable and accessible service for all cardiac patients adequate funding and resources should be made available to expand the cardiac rehabilitation service at the Mid-Western Regional Hospital, Nenagh to include a Phase III exercise component.

REFERENCE

1. Dalal H, Evans PH, Campbell JL. Recent developments in secondary prevention and cardiac rehabilitation after acute myocardial infarction. *BMJ*. 2004;328:693-697.



Clinical Research

Medical

TITLE	Gait Analysis in Orthostatic Hypotension using Footswitches
AUTHORS	<i>O'Connor, M., ¹ Culhane, K., ³ Finucane, A.M., ² Lyons, G., ³ Lyons, D.¹ Blood Pressure Unit, Mid-Western Regional Hospital, Dooradoyle, Limerick ¹ Rehabilitation Unit, St. Camillus Hospital, Limerick ² Department of Biomedical Engineering, University of Limerick ³</i>

INTRODUCTION

Orthostatic hypotension (OH) results in transient cerebral hypoperfusion leading to syncope, unsteadiness or falls. We postulated that elderly fallers with OH might develop secondary gait abnormalities adding further to falls risk.

METHODOLOGY

Case control study. Community-dwelling, ambulant subjects over 60 years (n=28) were recruited from our rehabilitation centre. Nine fallers with OH as determined by tilt-table testing and Finometer continuous phasic hemodynamic measurement (TNO-Amsterdam), nine fallers without OH (NOH-faller) and ten controls. Footswitches were used to evaluate the spatio-temporal gait parameters. The variability of each parameter from stride-to-stride was calculated using standard deviation (SD) from the mean.

RESULTS

OH-fallers walk more slowly (0.68 v 1.15 metres/second; $p=0.004$) and spend a greater proportion of the gait cycle in the stance phase than the control group. Despite this, gait variability was significantly greater in the OH-fallers than controls (stride-time variability 0.094 v 0.045 SD; $p=0.01$). NOH-fallers also demonstrated reduced walking speed (0.58 v 1.15 metres/second; $p=0.001$) and increased gait variability (stride-time variability 0.112 v 0.045 SD; $p=0.004$) compared with controls.

CONCLUSION

In patients with OH, we have demonstrated measurable gait abnormalities including increased gait variability. This is a recognized predictor of falls. Therefore, hemodynamic changes may not be the only contributing factor to falls in the OH-fallers. The presence of an abnormal gait in this group raises the prospect of it being secondary to permanent neurological damage due to repeated episodes of cerebral hypoperfusion or alternatively maladaptive gait due to fear of falling.



Clinical Research Medical

TITLE	The Yeast <i>Yarrowia lipolytica</i> as a Model for Obesity
AUTHORS	Pembroke, J.T. Molecular and Structural Biochemistry Group, Department of Chemical and Environmental Sciences and Materials and Surface Science Institute, University of Limerick

INTRODUCTION

Yeast strains such as the dimorphic yeast *Yarrowia lipolytica* store and mobilise lipid in a similar way to higher mammalian systems. Genome analysis of *Yarrowia* indicates that there is a high degree of conservation of the genes associated with lipid deposition and mobilisation with those of higher mammals. Yeast mutants altered in key adipose lipase enzymes have been isolated and phenotypic analysis indicates that they give rise to 'obese' yeast. Given that there are a number of key issues and minute interplays associated with fat uptake, storage, deposition, mobilisation and nutrient status which are emerging as major factors in obesity, the yeast *Yarrowia* offers a useful model to study this interplay.

Triglycerides are responsible for a number of different roles in a typical mammalian cell. They act as an efficient store of energy in the form of fatty acids, as a substrate for diglyceride formation and the subsequent formation of phospholipids upon re-esterification, both of which act as signal transduction molecules in cell signalling. In addition triglycerides can act as a means of removal of excess fatty acids from the cell. There has been a huge upsurge in lipid associated disorders including obesity and Type 2 Diabetes in recent times much of this associated with uptake, storage, regulation, deposition and mobilisation of lipid as a function of energy homeostasis (Kurat et al 2006).

Yarrowia lipolytica, a dimorphic lipid utilizing yeast, is routinely isolated from different foods, from natural environments like oil fields, effluent plants and environments contaminated with oil. Most isolates are haploid, but a stable diploid state exists that can be induced to form four-spored asci. Cells differentiate into yeast, pseudomycelium and true mycelial forms depending on growth conditions. The nuclear genome of *Y. lipolytica* is split into six chromosomes, totaling ca. 20-Mb of DNA. Many of the genes appear more similar to genes from filamentous fungi than from the yeast *S. cerevisiae* or have no known orthologues currently in the database. This recent genome sequencing has revealed significant information about the storage and degradation of lipid in *Yarrowia* including the interaction of hydrophobic substrates with yeast cells, their uptake and transport, the primary alkane oxidation to the corresponding fatty alcohols and then by different enzymes to fatty acids, and the subsequent degradation of lipid by peroxisomal β -oxidation or storage into lipid bodies. Several enzymes involved in hydrophobic substrate utilisation belong to multigene families, such as lipases/esterases (LIP genes), cytochromes P450 (ALK genes) and peroxisomal acyl-CoA oxidases (POX genes) (Fickers et al 2005a).

Yarrowia lipolytica contains five acyl-coenzyme A oxidases (Aox), encoded by the POX1 to POX5 genes, that catalyze the limiting step of peroxisomal β -oxidation (Mlickova et al 2004). Mutants in these genes are not lethal but severely limit the breakdown of accumulated lipid and tend to lead to fat accumulation

In *Yarrowia* the mobilisation of lipid occurs upon nutrient starvation where fatty acids are released from triglycerides and subjected to peroxisomal oxidation. Peroxisomes may themselves be repressed upon starvation leading to the use of lipid for membrane synthesis rather than energy. Conditions of nutrient status particularly in the presence of utilisable carbohydrate can effect mobilisation from storage depots (Papanikolaou et al 2002; Papanikolaou et al 2003). Several enzymes may also be involved in remodelling of the lipid content particularly



of the various yeast organelles. Nutrient status affects the pool of cellular lipases and their regulation and expression plays a pivotal role in whether deposition or mobilisation occurs. *Yarrowia* stores lipid in fat droplets, which bud from the endoplasmic reticulum, which consist of neutral lipid and emulsifying phospholipids. The enzymes which store and mobilise lipid from *Yarrowia* and other yeast are highly conserved particularly with the mammalian system.

In many yeasts the LIP2 gene was previously reported to encode all extra cellular lipase however the growth of a deletion derivative of LIP2 on triglycerides as sole carbon source suggested an alternative pathway for triglycerides utilisation. Genome analysis revealed two other lipase genes LIP7 and 8 which appear to belong to the triacylglycerol hydrolase family (EC 3.1.1.3) with these showing different substrate specificity for C6 and C10 fatty acids respectively (Fickers et al 2005a). Recently in *Saccharomyces* a new adipose triglyceride lipase Tgl4 has been identified which when knocked out in a background lacking the Tgl3 lipase resulted in hyper accumulation of lipid in fat droplets (Kurat et al 2006). This situation crudely mimics 'obesity' however in general the molecular understanding of fat storage and deposition and its subsequent mobilisation is rather limited and new regulatory networks, metabolic controls and enzymes are constantly being discovered. Yeasts such as *Yarrowia* offer the opportunity to analyse this system.

OBJECTIVE

We are currently carrying out metabolic engineering of *Yarrowia* using targeted gene knockouts of key lipid metabolic genes, which we have identified from the *Yarrowia* genome project.

METHODOLOGY

Our initial aim is to generate obese yeast and then look at ways of remediating the obese phenotype through over expression of other metabolic pathways, by altering metabolic utilisation (Szabo and Stofanikova 2002), by gene silencing via anti sense technology and through the use of metabolic inhibitors.



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Clinical Research

Palliative Medicine

TITLE	Evaluating the Need for a Staff Support/Counselling Service in a Palliative Care Setting
AUTHORS	<i>Houghton, F.,¹ Christensen, S.² ICRASS, Limerick Institute of Technology ¹ Milford Hospice, Castletroy, Limerick ²</i>

INTRODUCTION

Research in palliative care indicates that working in this environment can produce high levels of stress, job dissatisfaction, emotional burnout and compassion fatigue.¹⁻³ In particular, studies indicate that the stressors associated with hospice care are derived from the work environment, occupational role, patients and families and from illness-related variables.⁴ Progressive solutions aimed at supporting staff through these issues have centred around the delivery of staff support mechanisms which exist in a variety of forms, most notably with a counselling service.⁵⁻⁶

RATIONALE

To explore staff perceptions of the need for the provision of a staff support/counselling service, and to gain their comments on its role and nature.

METHODOLOGY

Qualitative research methodologies were used with a wide range of staff working in a palliative care setting in the Mid-West region of Ireland to determine if there was a need for a staff support/counselling service. In total 14 focus groups were conducted. Researchers also held 12 formal meetings with line managers, attended 3 team meetings, presented at one lunch-time education session, and met numerous staff informally throughout the organisation over a three week period.

RESULTS

It was clear that although many staff received excellent peer support from colleagues, there was almost uniform support for the introduction of a staff support/counselling service. A number of significant sources of stress were identified in this research project.

One obvious source of stress was dealing with death and dying patients. Particular areas of concern noted were inadequate pain control, as well as feelings of guilt, inadequacy and burnout. However it was clear from staff that dealing with families was routinely much more difficult and stressful than dealing with patients. Bereaved families were widely acknowledged as the main source of stress. However it was also noted by many staff that dealing with young people dying was particularly stressful. Many staff acknowledged feeling 'inadequately prepared' for dealing with this issue. Additionally some staff noted the extra stress involved in dealing with a dying patient of a similar age to themselves with whom they identified.

Many staff noted that workloads were such that staff taking holidays or being absent because of sick leave led to a significant increase in staff stress. Although this was not normally a problem, prolonged sick leave, or more than one member of a team absent due to sickness caused substantial stress.



Perhaps inevitably concerns were also raised regarding tension between management and staff. As well as feeling undervalued by management, some staff felt that communication within the organisation was flawed and that this was particularly evident in management–staff communication. The issue of the absence of structured feedback to staff in the form of annual evaluations was also noted as a bone of contention.

One clear finding from this research was the need to have any proposed staff support/counselling service available to all staff, and not just ‘front-line’ care staff. Staff throughout the organisation were almost routinely dealing with grieving families and relatives. This included fundraising, finance, catering, maintenance and cleaning staff. In line with Ireland’s growing multi-cultural and multi-lingual workforce, some staff noted the need for any proposed staff support/counselling service to move beyond a traditional mono-cultural Catholic English-speaking service.

Despite a strong pastoral care element within the organisation and the long-standing informal use of the social work department to provide staff support, there was overwhelming support for the introduction of a formal staff support/counselling programme. Some staff felt that as the organisation had grown, it now needed to formalise such activities. Staff indicated that any proposed service should include not just 1:1 counselling work, but also team/group counselling and debriefing sessions, as well as ongoing training for all staff. Staff also generally agreed with the introduction of an annual check-in with the support/counselling service, similar to a physical health annual check-up.

CONCLUSION

These findings clearly support the need for the provision of a staff support/counselling service for all staff working in palliative care settings.

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Clinical Research

Surgical

TITLE	The Effect of Head Protection on the Hearing of Rugby Players
AUTHORS	<i>Kieran, S.M., Dunne, J., Hughes, J., Fenton, J.E. Department of Otorhinolaryngology, Head and Neck Surgery, Mid-Western Regional Hospital, Dooradoyle, Limerick</i>

INTRODUCTION

Professional rugby players utilise various methods of head protection, in particular to prevent against the development of a conchal haematoma. We hypothesise that these measures whilst preventing injury, decrease the wearers' hearing threshold and therefore their performance.

METHODOLOGY

Eight patients had free field audiometry performed in a sound proof room, with warble tones. All patients were young males (Mean 24.75 years (range 22 – 34). No patient had ear symptomatology or a past history of ear surgery. Three separate audiological assessments were performed on each patient; air, following application of adhesive tape and whilst wearing a scrum cap (Rugbytech Ltd). All measurements were performed by a single senior audiological scientist. A significant drop in hearing threshold was defined as an increase of 10 dB.

RESULTS

No patient demonstrated a significant drop in hearing threshold post the application of either tape or a scrum cap as can be seen in Table 1.

Table 1 - Mean Changes in Hearing Level Following Application of Ear Protection ~ Measurements Performed at Four Frequencies (500hz, 1kHz, 2kHz, 4kHz)

	500Hz	1kHz	2kHz	4kHz
Mean change post Tape (dB)	-0.625	-1.875	0	1.875
Mean change post scrum cap (dB)	-1.875	-1.25	-1.25 (fixed alignment)	5 (fixed alignment)

CONCLUSION

Theoretical concerns that "ear taping" and scrum caps affect hearing of rugby players are unfounded and shouldn't dissuade against their use.

PRESENTED

At the Royal Academy of Medicine in Ireland (Otorhinolaryngology Section) Spring Meeting in Mount Juliet on April 1st, 2006 by Dr. Stephen Kieran. *Winner of the Clinical Research Prize.*



Clinical Research

Surgical

TITLE	Management of Acute Cholecystitis Patients in an Acute General Hospital
AUTHORS	<i>Abdeldaim, Y., Mahmood, S., McAvinchey, D. Department of Surgery, Mid-Western Regional Hospital, Nenagh, Co. Tipperary</i>

INTRODUCTION

Gallstone disease is a common problem in the western world; it affects 12% of the general population. Opinions among surgeons regarding the optimum management of acute cholecystitis remain divided.¹

OBJECTIVE

The aim of this study was to evaluate the outcome of the management of patients diagnosed with acute cholecystitis in our hospital over a period of five years.

METHODOLOGY

This is a retrospective study of consecutive patients with diagnosis of acute cholecystitis, admitted to our hospital from January 1st 2001 to December 31st 2005. Demographic details, duration of symptoms, investigations, diagnosis, treatment, outcome, post-operative follow up and complications were collected from HIPE and hospital records of the patients. 100 patients were included in this study.

RESULTS

Male: Female: number (%): 62:38 (62:38). Age: range (median): 15-91(53). Conservative management was attempted in 96 of 100 patients (96%) and 4 patients (4%) had emergency laparoscopic cholecystectomy in the first 72 hours of admission. Out of the 96 patients who were managed conservatively ten 10 patients (10.4%) had follow-up in another hospital, 62 (64.5%) had elective laparoscopic cholecystectomy 6-8 weeks after discharge, conversion to open in 8 of them (20%) the causes of conversion were mainly adhesions and difficult anatomy. 8 patients (8.3%) had failed conservative treatment after 7-10 days and they had laparoscopic converted to open cholecystectomy due to dense adhesions. 16 (20%) patients had a second emergency admission due to a second attack of acute cholecystitis, and they were managed conservatively for the second time. 10 (62.5%) of them did not respond to conservative treatment, and laparoscopic converted to open cholecystectomy was done in all of them. 6 (37.5%) patients had a third admission for elective laparoscopic cholecystectomy.

DISCUSSION

Traditionally, early surgery for acute cholecystitis was discouraged. Patients were managed conservatively with intravenous fluids, antibiotics and analgesics until the inflammation in the gallbladder resolved, and then delayed surgery (elective cholecystectomy), usually 6-8 weeks after discharge, was performed. However, more than 20% of patients fail to respond to medical management or experience recurrent cholecystitis during the intervening period.² Nevertheless, early cholecystectomy at the acute admission was shown to be advantageous more than twenty years ago.³ A randomized controlled trial of laparoscopic versus open cholecystectomy for acute cholecystitis also found that the laparoscopic technique was safe and effective in experienced hands, and



led to a lower morbidity rate and shorter hospital stay ⁴. Early cholecystectomy is the routine practice of only 11% of general surgeons who manage this condition. The reasons why early cholecystectomy is not commonly undertaken include a lack of availability of experienced surgeons and problems with the availability of both emergency theatre time and radiological investigations ⁵. Emergency admission with gallstone related problems is common among patients awaiting elective cholecystectomy. The cost of treating these patients is high ¹. In this study there were 4 patients only treated with emergency laparoscopic cholecystectomy in the first 72 hours with no conversion to open. Patients treated conservatively 20% had conversion to open at elective laparoscopic cholecystectomy. Moreover, 8% failed to respond to medical treatment and all of them had conversion to open (100%). 16 patients (16.5%) were re-admitted acutely, while waiting for elective cholecystectomy, with a second attack of acute cholecystitis. Ten of them (62.5%) failed to respond to medical treatment and all of them had laparoscopic converted to open cholecystectomy. The overall conversion from laparoscopic to open cholecystectomy was in 26 (30%) patients.

CONCLUSION

Emergency laparoscopic cholecystectomy should be routinely used for patients admitted with acute cholecystitis.

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PRESENTED

At the 31st Sir Peter Freyer Memorial Lecture and Surgical Symposium in Galway on September 1st and 2nd, 2006 by Mr. Yasser Abdeldaim.



Clinical Research

Surgical

TITLE	A 14 Year Audit of Vascular Trauma Management in the Irish Mid-West
AUTHORS	<i>Abdulkarim, A., Fleming, F., Kavanagh, E., Burke, P., Grace, P.A. Department of Vascular Surgery, Mid-Western Regional Hospital, Dooradoyle, Limerick</i>

INTRODUCTION

Vascular Trauma is a common cause of mortality and morbidity worldwide. Little accurate quantitative data is presently available on the nature and outcome of these injuries. This study reports the results of a retrospective 14 year audit of vascular trauma in the Mid-West.

OBJECTIVE

To determine the mechanisms, treatment and outcome of vascular injuries.

METHODOLOGY

Patients suffering vascular trauma between January 1992 and December 2005 were analysed using data collected retrospectively. Patients' demographic and clinical details were assessed in terms of severity, association with other injuries, vessels involved, procedure performed, complications and final outcome at last follow up.

RESULTS

34 patients were operated on during the period. The median age was 34.5 years (range 3-80 years), the majority (74%) were male.

Road traffic accidents accounted for 15(44%) of injuries, stabbing 5(15%), iatrogenic 2(6%), other accidents 11(32%) and only 1(3%) injury was due to gunshot. 16(47%) cases were associated with fracture and 8(24%) with nerve damage.

The primary procedures performed were ligation 8(24%), interposition with vein 11(31%), repair with no patch 6(18%), end to end anastomosis 2(6%), bypass 2(6%), venous repair 1(3%), exploration only 1(3%) and primary amputation 1(3%). 11 patients required secondary operations including fasciotomy 1(3%), skin graft 1(3%), embolectomy 5(15%) and further amputation 2(6%).

Median follow-up was 17 months. 73% of patients were symptom free at last follow-up, 6(18%) had neurological deficit, 1(3%) leg ulcer, 1(3%) discharging sinus and 1(3%) skin contracture.



Table 1 - Commonly Injured Vessels in Vascular Trauma

Vessel	No. of patients	%
Brachial Artery	13	37%
Common Femoral Artery	5	15%
Superficial Femoral Artery	1	3%
Popliteal Artery	3	9%
Peroneal Artery	1	3%
Radial Artery	2	6%
Temporal Artery	4	12%
Mesenteric Artery	3	9%
Axillary Artery	1	3%
Great Saphenous Vein	1	3%
Total	34	100%

CONCLUSIONS

Our experience is likely to represent that of other vascular units in Ireland.

PRESENTED

At the 31st Sir Peter Freyer Memorial Lecture and Surgical Symposium in Galway on September 1st and 2nd 2006 by Dr. Ali Abdulkarim.



Clinical Research

Surgical

TITLE	Blood Transfusion Requirements in Otolaryngology, Head and Neck Surgery
AUTHORS	<i>Adelola, O.A., ¹ Kieran, S.M., ¹ Joyce, S., ² Hughes, J., ¹ Manning, K.P., ¹ Fenton, J.E. ¹ Department of Otolaryngology, Head and Neck Surgery, Mid-Western Regional Hospital, Dooradoyle, Limerick ¹ Department of Haematology, Mid-Western Regional Hospital, Dooradoyle, Limerick ²</i>

INTRODUCTION

Head and neck surgical operations are often associated with major blood loss requiring substitution with allogenic blood transfusion. It has been reported that 14-80% of patients undergoing major head and neck cancer surgery require blood transfusion. Over the last decade, the view that blood transfusion is safe and effective has been under scrutiny. Hence, the traditional guidelines of blood transfusion which include: haemoglobin < 10g/dl, blood loss of > 500mls and the practice of single unit transfusion has changed. The risks of allogenic blood transfusion to surgical and cancer patients are well known.

OBJECTIVE

The goal of this study is to retrospectively examine blood transfusion practice and cross-match to transfusion ratio in otolaryngology, head and neck surgery.

METHODOLOGY

A retrospective review of patients' records between 2001 and 2006 was performed. These patients had head and neck operations and preoperative cross-matching or group and save arrangements were made. The blood bank database was used to identify patients who received blood transfusion. Exclusions from the study include: Chemotherapy anaemia, incomplete records and missing records. Data obtained are: nature of admission, pre-transfusion and pre-operative haemoglobin, timing of blood transfusion, operative blood loss, operative and post-operative vital signs recordings.

RESULTS

The broad spectrum of operations in the study population is outlined in Figure 1. Out of 213 cases, only 6% (13) received blood transfusion.

Regarding timing of blood transfusion all patients had intraoperative transfusion, although there is no record as to haemodynamic instability. Presumably, it was to counter operative blood loss. Documentation of operative blood loss was found to absent in most of the charts. Nursing records were used in obtaining this information.



Table 1 - Total Number of Cases Transfused Against Those Not Transfused Per Type of Operation

Nature of operation	Transfused	Not transfused
Thyroidectomy	5	79
Laryngectomy and Neck Dissection	4	16
Pharyngolaryngoesophagectomy	2	-
Parotidectomy and Neck Dissection	1	87
Radical Neck Dissection	1	31

Table 2 - Thyroidectomy

Preoperative Hb (g/dl)	Blood loss (mls)	No of units
14.8	1,700	2
8.7	600	6
14.1	800	2
11.7	1,400	2
14.1	800	2

Table 3 - Laryngectomy and Neck Dissection

Preoperative Hb (g/dl)	Blood loss (mls)	No of units
14	1,090	2
14	Not recorded	7
16.1	Not recorded	1
14	1,675	1



Table 4 - Preoperative Haemoglobin (Hb), Blood Loss and Total Number of Units Transfused Per Type of Operation

Operation	Preoperative Hb(g/dl)	Blood loss (mls)	No of units
Parotidectomy and Neck Dissection	14.4	Not recorded	2
Radical Neck Dissection	13.6	1,200	2
Pharyngolaryngoesophagectomy	12.3	795	4
Pharyngolaryngoesophagectomy	12.0	2,630	4

CONCLUSION

This study shows that cross-match to transfusion ratio is 16:1 for head and neck cancer patients in our department, leaving a potential area of saving blood especially now that cost considerations are increasingly important in healthcare. Hence, we need to revisit our blood ordering policy.

Also since intraoperative blood transfusion is common, one area of benefit will be to look at other alternatives to allogenic blood transfusion especially considering the well known risks of blood transfusion.

PRESENTED

At the Royal Academy of Medicine in Ireland (Otolaryngology Head and Neck Section) Spring Meeting in Mount Juliet April 1st, 2006 by Ms. O. Adelola.



Clinical Research

Surgical

TITLE	Is Preoperative Group and Hold Necessary in Laparoscopic Cholecystectomy?
AUTHORS	<i>Hussain, A., Rashid, A., Ali, A., Ahmad, N.Z., O'Ceallaigh, D., Byrnes, G., Naqvi, S.A. Mid-Western Regional Hospital, Ennis, Co. Clare</i>

INTRODUCTION

There have been several unnecessary investigative procedures in place which need to be reconsidered with the introduction of new protocols. The aim of this study was to revise the need for blood group and save policy in terms of cost effectiveness and patient outcomes in laparoscopic cholecystectomy.

METHODOLOGY

158 patients underwent laparoscopic cholecystectomy over a period of two years. All patients had blood group and hold prior to surgery. Pre and Postoperative haemoglobin was compared using the Apex Database of the haematology department. Patients with incomplete data were excluded from the study. Microsoft Excel and SPSS were used for statistical calculations.

RESULTS

Out of 158 patients 122 were female and 36 were male, mean age was 50 years (18-78), the mean drop in postoperative haemoglobin was 1.4 grams (0-6.6). Only 8 patients (5%) were transfused postoperatively either in recovery or in the ward indicating the non-acuteness of the situation. None of the patients was given a blood transfusion in the operating theatre.

CONCLUSION

Patients in need of urgent blood transfusion can have uncrossed matched blood in five minutes, group compatible blood in ten minutes and fully compatible blood in one hour without compromising the quality of health care. Therefore we recommend that preoperative blood group and hold policy is an unnecessary investigative procedure for laparoscopic cholecystectomy, especially when performed as an inpatient. A new protocol needs to be set on this issue.



Clinical Research

Surgical

TITLE	Variations in Inguinal Hernia Repair among Irish Surgeons
AUTHORS	Hussain, A., Ali, A., Lal, K., Ahmad, N.Z., O’Ceallaigh, D., Byrnes, G., Naqvi, S.A. Mid-Western Regional Hospital, Ennis, Co. Clare

INTRODUCTION

Inguinal hernia repair is one of the most common surgical procedures performed. Both open and laparoscopic techniques have been used, but tension free repair of hernia with mesh has shown a reduced rate of recurrence as compared to a sutured repair. Laparoscopic repairs have less postoperative pain with early return to normal activity.

OBJECTIVE

The aim of this study is to find out common practice and variations in the repair of inguinal hernia among Irish surgeons.

METHODOLOGY

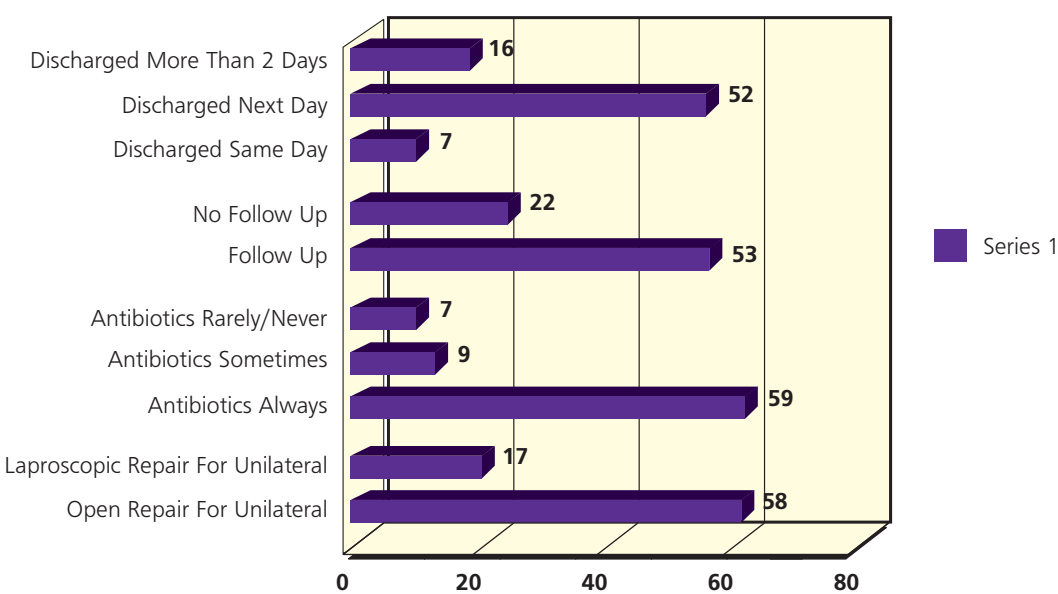
Questionnaires were sent to 117 general surgeons, working in Ireland asking about open and laparoscopic repair, number of hernias performed, routine repair of unilateral hernia, methods used for bilateral and recurrent hernia, use of prophylactic antibiotics, follow-up, type of anaesthesia, day procedure, type of open repair and laparoscopic technique used. 84 (74%) surgeons responded and 9 have been excluded because they do not perform hernia repairs at all. The remaining 75 were included in the study.

RESULTS

For unilateral hernia repair, the most commonly used method was the open method n=58 (77%), while 17 (23%) surgeons do laparoscopic repair for unilateral cases. 59 (79%) surgeons always use prophylactic antibiotics. 54 (64%) surgeons perform repair only under GA. Day case hernia repair is sometimes done by n= 40 (53%) surgeons while only 13 (17%) always do open repair as a day case. 69 (92%) surgeons perform lichtenstein repair when they use open method. 52 (70%) surgeons discharged their patients on the next day. See Figure 1.



Figure 1 - Variations in Inguinal Hernia Repair



CONCLUSION

Lichtenstein repair is the most common method used for open repair of inguinal hernia by Irish surgeons although there are some surgeons who perform laparoscopic surgery for inguinal hernia.

INTRODUCTION

Western lifestyle, exposure to sunlight and public awareness about common skin cancers has increased the rate of medical consultation for benign skin lesions. Excision of skin lesions has been considered a minor procedure and has been subject to delays after being referred by the general practitioners. The aim of this study was to compare the public concerns and the final histological diagnosis and its association with other possible factors.

METHODOLOGY

This study is based upon a prospective analysis of 100 consecutive patients admitted to the day ward from January 2006 to April 2006 for excision of skin lesions under local anaesthesia. Final diagnosis was established on the basis of histopathology report. Pearson’s Chi-Square test was done for incidence of malignancy in relation to age, gender, size and site of lesions.

RESULTS

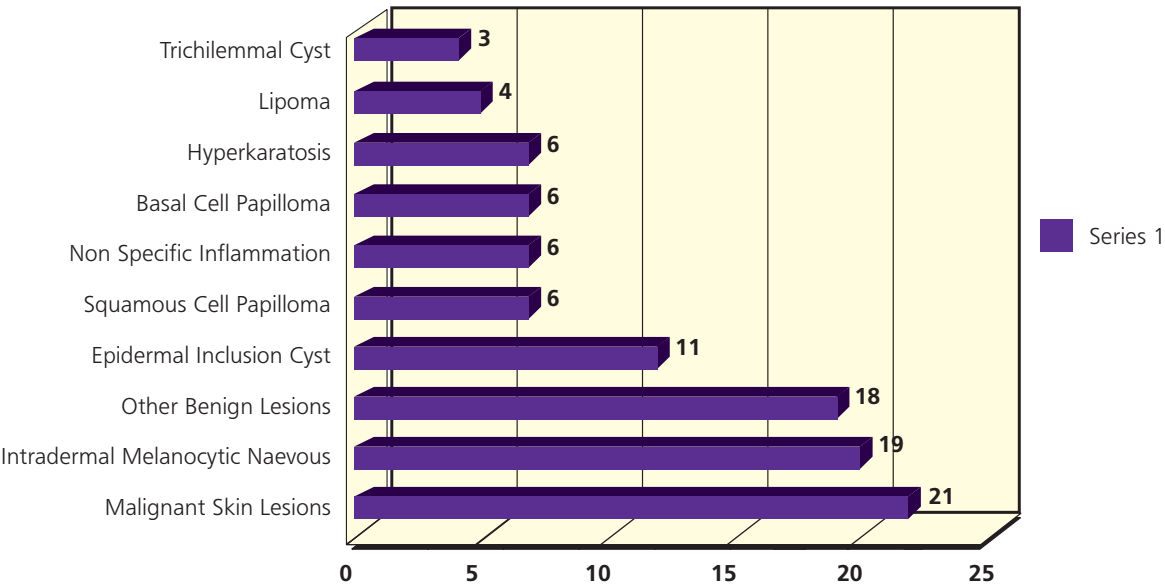
Out of 100 cases 35 were male and 65 female. They were divided into two groups on the basis of age. Group I was above the age of 70 and included 34 patients whereas Group II comprised 66 patients below the age of 70. Malignancy was reported in 22 patients. 20 of these patients were in Group I and 2 in Group II. Malignancy in Group I was 59%. Incidence of malignancy was found to be significant for age and site of lesions (p value <0.05) and insignificant for gender and size of lesions. The remainder of the histological diagnosis is given in Table 1.

Table 1 - Detailed Histological Diagnosis of the Skin Lesions

Histological Diagnosis	Cases	Histological Diagnosis	Cases
Trichilemmal Cyst	3	Lipoma	4
Hyperkeratosis	6	Basal cell papilloma	6
Non-specific inflammation	6	Squamous cell papilloma	6
Epidermal inclusion cyst	11	Other benign lesions	18
Intradermal melanocytic naevus	19	Malignant skin lesions	22



Figure 1



CONCLUSION

Although the majority of cases referred by general practitioners for excision of skin lesions prove to be benign, adequate wide excision is recommended above the age of 70 as there is a possibility of malignancy in every second patient. This can avoid unnecessary wider excision at a later stage.

PRESENTED

As a Poster Presentation at the Waterford Surgical Club in October 2006.

INTRODUCTION

Basal and squamous cell carcinomas and their variants are the commonest skin cancers. Incomplete excision is considered failure of treatment and has been associated with recurrence of symptoms, increasing morbidity. The aim of this study was to emphasize the benefits of close clinical monitoring in cases of incompletely excised malignant skin lesions.

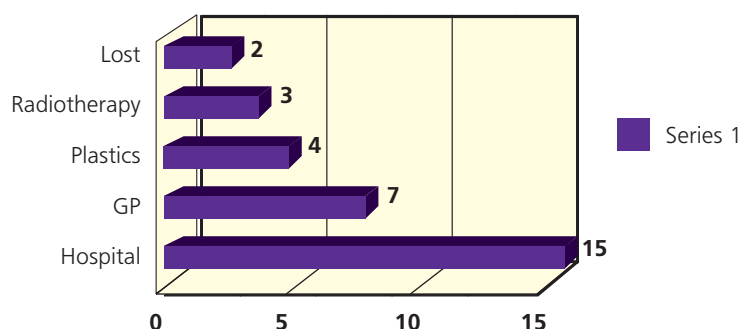
METHODOLOGY

It was a retrospective analysis of 61 incompletely excised malignant skin lesions between January 2002 and December 2004. Data was collected from outpatient records, operation theatre notes and histology reports. They were divided into two groups. Group I comprised 30 cases who were re-operated on soon after the first excision. Group II, comprising 31 patients were not re-operated on because of low clinical suspicion of residual disease and old age.

RESULTS

In Group I there were 3 recurrences after re-excision. In Group II, two recurrences were seen after a mean follow-up of two years, 7 patients were referred to specialized centres for further management and the rest of the 22 patients did not show any sign of recurrence after clinical monitoring in surgical outpatients and by the GP. Two of the cases were lost from follow-up.

Figure 1 - Sequelae of Unoperated Cases





CONCLUSION

Histological diagnosis of incomplete excision should always be assessed and compared with the clinical findings. When the histological diagnosis is not supported by clinical examination, close monitoring of the area is as effective as a complete re-excision and furthermore it avoids the operative morbidity. It is recommended to have a period of close follow-up before attempting re-excision.

PRESENTED

As a Poster Presentation at the Waterford Surgical Club in October 2006.

Clinical Research

Surgical

TITLE Optimizing the Medical Therapy of Acute Surgical Patients

AUTHORS Ahmad N.Z., Mirghani, D., Byrnes G., O'Ceallaigh, D., Naqvi, S.A.
Mid-Western Regional Hospital, Ennis, Co. Clare

INTRODUCTION

Surgical patients admitted via the Accident and Emergency Department are managed surgically as well as medically. Prognosis depends on factors like appropriate medical therapy, timely surgical intervention, preoperative optimisation and postoperative care. Whether the management is operative or conservative, medications play a vital role in the final outcome. The aim of the study was to analyse the contribution of different grades of doctors in achieving the optimal level of medical treatment.

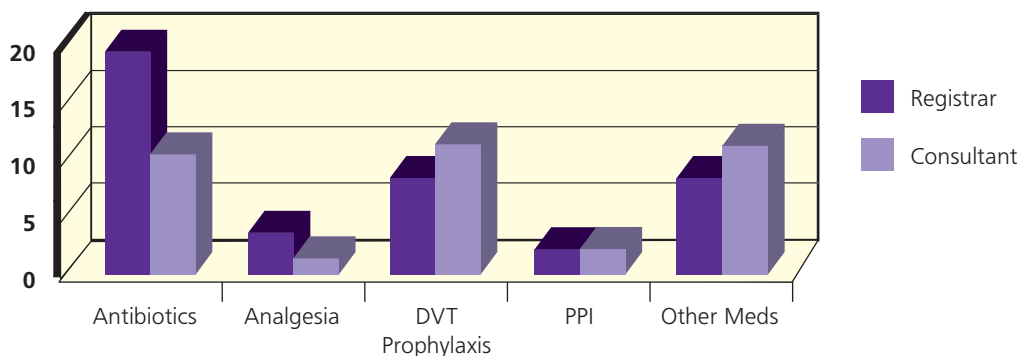
METHODOLOGY

A total of 110 acute surgical patients admitted in to the Mid-Western Regional Hospital Ennis in July and August 2006 were studied prospectively with primary endpoint of change in medical therapy and secondary endpoint of time span in achieving this change.¹ Effect of concurrent medications on management and accuracy of diagnosis by junior doctors was also determined. Transfers to other hospitals, admissions in transit and patients in need of further investigations to establish a diagnosis were excluded from the study.

RESULTS

Acute surgical admissions included 59 males and 51 females with mean age of 47.85 ± 24.20 years. Initial diagnosis was accurate in >80% of cases. Conservative treatment was commenced in 79 cases, whereas 31 patients were managed surgically. All of the cases were started on appropriate medical treatment by the admitting doctors. Medications were amended in 39% of patients by the registrars whereas the consultants changed medications in another 31 % of patients. Both spectra of changes occurred within first 12 and 24 hours of the admission respectively.

Figure 1 - Changes in Medications at 12 and 24 Hours



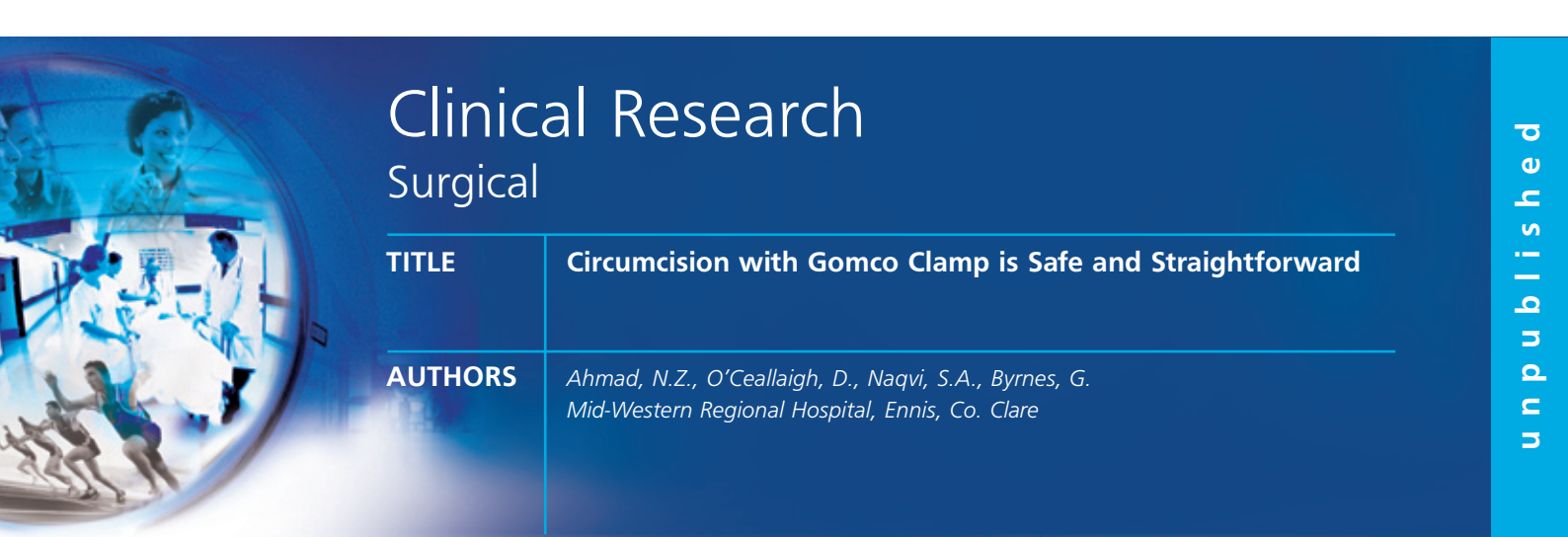


CONCLUSION

In spite of high accuracy of initial diagnosis, significant changes in management take place in first 24 hours. Early involvement of senior grade doctors can expedite the process and improve the outcome further.

PRESENTED

As a Poster Presentation at the 2nd Annual Interdisciplinary Conference in Cork on November 17th, 2006.



Clinical Research

Surgical

TITLE Circumcision with Gomco Clamp is Safe and Straightforward

AUTHORS Ahmad, N.Z., O’Ceallaigh, D., Naqvi, S.A., Byrnes, G.
Mid-Western Regional Hospital, Ennis, Co. Clare

INTRODUCTION

Circumcision is one of the oldest and commonest paediatric surgical procedures. Medical indications for circumcision include phimosis, paraphimosis, balanitis, and non-retractile foreskin. Cultural circumcision is also done in a large number of cases. This procedure is usually done as a day case procedure, but sometimes postoperative complications can prolong the hospital stay. The aim of our study was to draw attention to an easy, quick and safe method of circumcision in children.

METHODOLOGY

A total of 108 patients underwent circumcision from January 2002 to June 2006 in the Mid-Western Regional Hospital, Ennis. They were analysed for the hospital stay as primary endpoint and postoperative morbidity as secondary end point. Postoperative complications included bleeding, haematoma, oedema and pain. They were divided into two groups depending on whether open method or Gomco clamp was used for circumcision.

RESULTS

Out of 108 patients, there were 29 adults and 72 children. Conventional open surgical technique was used in all adults whereas Gomco clamp was used in 50% of children. Five 5 adults and 4 children had to stay overnight after the procedure. Out of 4 children, 2 cases had the procedure done as an emergency. In the remaining 2 cases, Gomco clamp circumcision was used for one and open method for the other. Circumcision in two adults was done in conjunction with other procedures increasing their hospital stay.

Table 1 - Incidence of Overnight Stay after Circumcision

Category	Operations	Overnight stay	Percentage
Adults	29	5	17.24 %
Children	72	4	5.55 %
Total	108	9	8.33 %

CONCLUSION

Gomco clamp circumcision in children is a reliable and safe technique with good cosmetic results. In addition, it is a swift and bloodless technique associated with less postoperative complications.

Clinical Research

Surgical

TITLE

Wide Diversity in Operative Technique for Laparoscopic Cholecystectomy Exists Among Irish Surgeons

AUTHORS

*Lal, K., Abdulkarim, A., Muhammad, KM., Hussain, A., Ali, A., Coakley, D., Byrnes, G., O'Ceallaigh, D., Naqvi, S.A.
Mid-Western Regional Hospital, Ennis, Co. Clare*

INTRODUCTION

Laparoscopic cholecystectomy (Lap-chole) has now become the "gold-standard" in the management of uncomplicated and complicated gallbladder disease. Gallstone disease remains one of the most common medical problems leading to surgical intervention, which might explain an increase in the cholecystectomy rate in Ireland. According to the HIPE National File, 4,424 cholecystectomies were performed in Ireland during the year 2005, out of which 3,721 (88.22%) were performed laparoscopically. The laparoscopic bile duct exploration was carried in 60 patients. 363 were open cholecystectomies, 236 (5.3%) were laparoscopic to open conversion while open cholecystectomy with bile duct exploration was performed in 44 patients. General principles of gallstone management have not notably changed. However, the technique in laparoscopic cholecystectomy has been dramatically altered.

OBJECTIVE

In order to establish best practice in this area for junior surgeons, various trends and techniques used among Irish surgeons are currently being studied.

METHODOLOGY

A survey questionnaire included questions about the number of laparoscopic cholecystectomies performed by individual surgeons each year, the position of the surgeon during the operation, details about operative technique, the use of intra-operative cholangiogram, closure of fascial defects, insertion of post operative drain, when to feed and discharge the patient and the timing to perform laparoscopic cholecystectomy in acute cholecystitis.

RESULTS

Survey questionnaires were posted to 118 consultant surgeons. 76 (64.4%) responded. 6 were excluded as they do not perform Lap-chole. Only 12 surgeons performed more than 100 Lap-chole annually. There were significant differences in the operating technique between the surgeons who were included in the study. 67 (88%) surgeons preferred to stand on the left side of the operating table. 45 (60%) used the Hassan technique to create the pneumoperitoneum. 70 (92%) surgeons reported the use of four ports during the lap-chole. Gallbladder delivery was found by 35 surgeons via umbilical port and by 34 via epigastric port. 39 (51%) surgeons used to close the umbilical port fascial defect only and 27 (35%) reported closing both umbilical and epigastric ports. Only 7 surgeons use the intra-abdominal drain routinely. 48 (63%) discharged the patient the day after their operation.



Table 1 - Technique Variations Among Irish Surgeons

	Use of endobag	Use of intra-abdominal drain	Use of intra operative cholangiogram
Routinely	28 (37%)	7 (9%)	1 (1%)
Selectively	31 (40%)	17 (22%)	24 (32%)
Seldom	15 (20%)	42 (56%)	33 (43%)
Never	2 (3%)	10 (13%)	18 (24%)
Total	76 (100%)	76 (100%)	76 (100%)

CONCLUSION

Significant differences exist in operative technique among Irish surgeons in performing laparoscopic cholecystectomy despite the national and international guidelines. Multi-centre audits are recommended for a standard technique for a Lap-chole.



Clinical Research

General Practice

TITLE	The Known Prevalence of Diabetes Mellitus by Age in Irish General Practice: A Cross-Sectional Examination
AUTHORS	Houghton, F., ¹ O'Connor, R., ² Saunders, J., ³ Dobbs, F. ⁴ ICRASS, Limerick Institute of Technology, Moylish Park, Limerick ¹ General Practitioner, Limerick ² Statistical Consulting Unit, Department of Statistics, University of Limerick ³ Department of General Practice, University of Ulster, Coleraine, Northern Ireland ⁴

INTRODUCTION

Although the dearth of information on the prevalence of chronic illness and obesity was noted in Ireland over a decade ago,^{1, 2} it is notable that very few studies in Ireland have examined the issue of the prevalence of Diabetes in depth. Improved information on Diabetes prevalence and incidence in the Irish population is essential to combat this tragic and 'insidious' disease,³ with its manifold complications.⁴ Research from New Zealand,⁵ a country with a population broadly similar in size to Ireland, indicates that Diabetes is the ninth leading cause of Years of Life Lost (YLL) among both males and females (accounting for 3,321 YLL and 3,258 YLL respectively). More worrying from both a financial and quality of life perspective is the impact of Diabetes on Years of Life Disabled (YLD). Diabetes in New Zealand is the third leading cause of YLD among males and the fourth leading cause among females (accounting for 7,280 YLD and 7,404 YLD respectively).⁵

Diabetes Mellitus has been described in recent years as having reached both '*epidemic*'⁴ and '*pandemic*'⁶ proportions. The personal, financial and social costs of Diabetes associated with ageing populations that are increasingly sedate and over-nourished has led some commentators to state that '*Worldwide the burden of Diabetes Mellitus is becoming unsustainable.*'⁷ Despite these clear warnings, the exact prevalence of Diabetes in the community is not known in Ireland.

One of the main studies examining the issue of the prevalence of Diabetes in Ireland to date focussed on 50 – 69 year olds in Counties Cork and Kerry.⁸ This research noted a prevalence rate for Type 2 Diabetes Mellitus of 3.9% (95% CI 2.9% - 5.4). Prevalence rates among males and older age groups within this cohort were substantially higher. A second study⁹ examining the prevalence of Diabetes in those presenting to general practice, which involved screening and testing of those over 40 years of age using both a random venous plasma glucose (RVPG) measurement and if appropriate a subsequent Glucose Tolerance Test (GTT) noted a prevalence rate of 9.2%.

OBJECTIVE

To explore the known prevalence of Type 1 and Type 2 Diabetes Mellitus by age in Irish General Practice in the Mid-West.

METHODOLOGY

This was a cross-sectional study. General Practitioners working in the Mid-Western Health Board region were identified from the Primary Care Unit listing. Doctors working in 3 of the 4 Local Authority areas covered by the Mid-Western Health Board region were selected. The regions were Limerick City, Limerick County and County Clare. The practices were stratified according to the following criteria: secretarial support; employment of a practice nurse; computerisation; urban/rural setting; and group/single-handed. Practices in these 10 different categories were then selected using random numbers.



The selection process aimed to match the sample to a nationally representative pattern using data from the ICGP national general practice study.¹⁰ Ethical approval was given by the ICGP Ethics Research Group. Following this a questionnaire was posted to the practice with an accompanying SAE to enhance the response rate. After 2 weeks, a telephone reminder was given to non-responding practices. The questionnaire was divided into 2 parts. The first part sought practice characteristics. The second part looked at individual patients.

Diabetic patients were identified from doctor's knowledge, electronic searching of computerised records, disease registers and repeat prescriptions for diabetic drugs. Diabetes was diagnosed according to American Diabetes Association (ADA) or World Health Organisation criteria.¹¹ Due to the absence of universal patient registration, the overall population for each practice was estimated using methodology recommended by the ICGP. All patients having a medical card (i.e. those in the General Medical Services scheme) were automatically included, as well as those private patients seen at any time in the previous 5 years.¹²

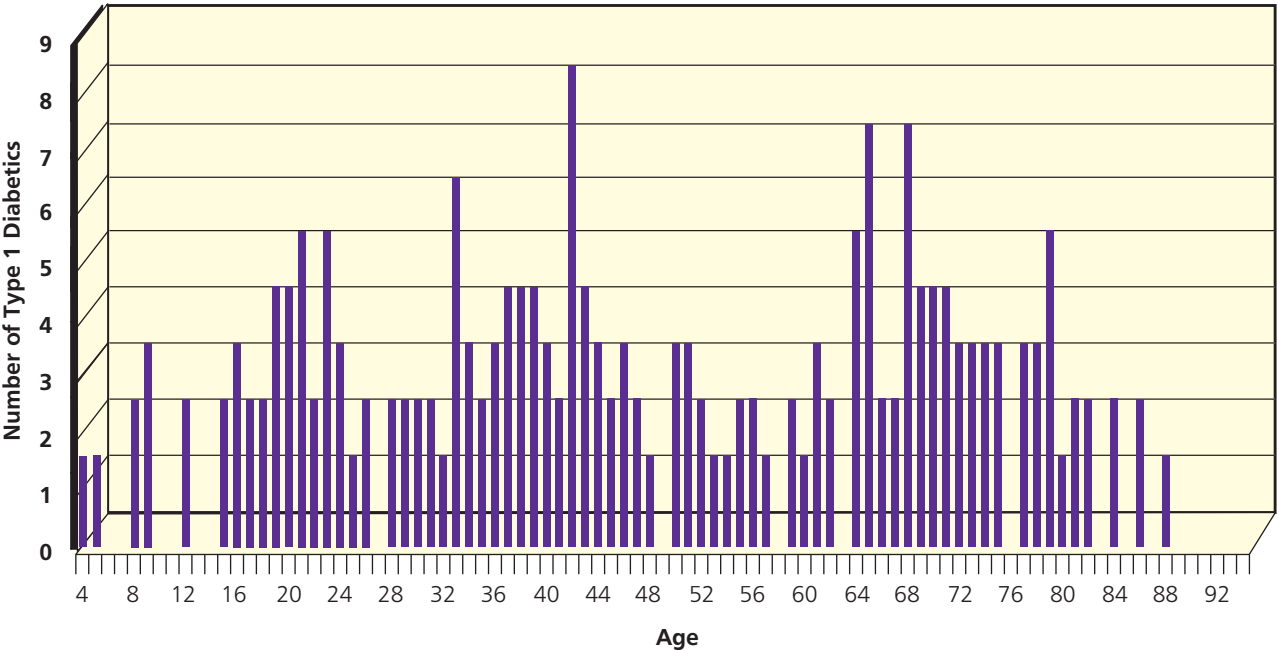
RESULTS

Fifty-two questionnaires were distributed. Twenty-seven were returned giving a response rate of 52%. Data from 1,030 diabetic patients was obtained.

A total estimated practice population of 70,799 was identified across the 27 GP practices. The total figure of 1,030 diabetic patients therefore represents a crude known Diabetes rate of 1,454.82 per 100,000, or 1.45% of this sample. 201 known Type 1 diabetic patients were identified in this study. This group ranged in age from 4 years of age to 88 years, with a mean age of 47.5 years (sd = 21.8) (See Figure 1). 42.3% of the known Type 1 diabetic patients were female, while 57.7% were male. The 201 Type 1 diabetic patients identified constitute 0.3% of this sample, yielding a crude known rate of 283.98 per 100,000.

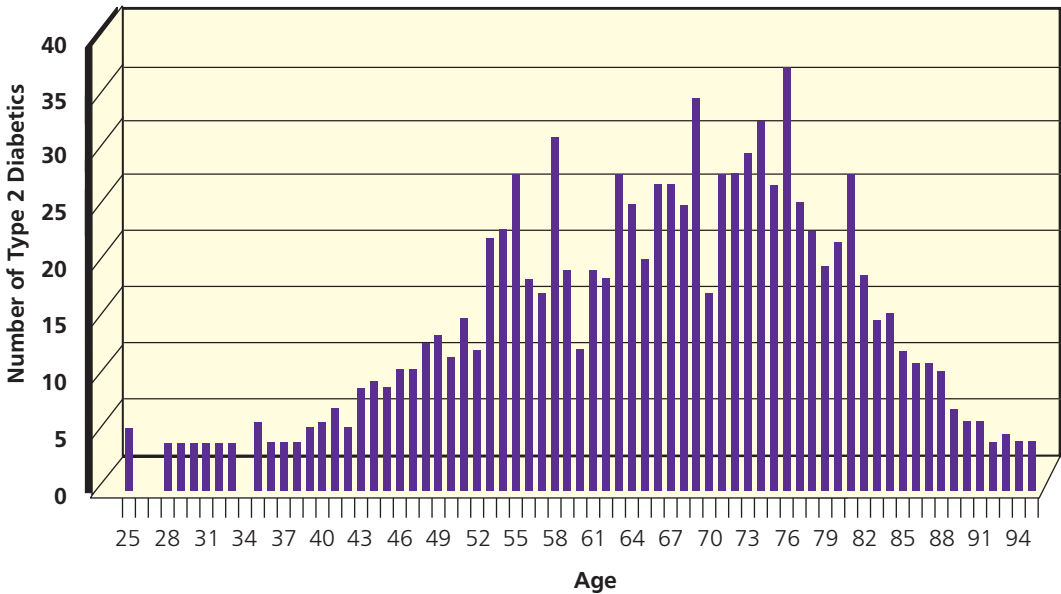


Figure 1 - Type 1 Diabetes by age



829 known Type 2 diabetic patients were identified, ranging in age from 25 to 95 years of age (See Figure 2). This group had a mean age of 66.7 years (sd = 12.6). 42.1% of the known Type 1 diabetic patients were female, while 57.9% were male. The 829 Type 2 diabetic patients identified represent 1.2% of this sample, yielding a crude known rate of 1,171.25 per 100,000.

Figure 2 - Type 2 Diabetes by age





Given the clear association between increasing age and the prevalence of Type 2 Diabetes, it was felt that age specific rates would be of use. However within the confines of available information in this study such rates could only be calculated on the basis of those aged under 50 years, and those aged 50 years plus. 82 of the known Type 2 diabetic patients identified in this study were aged under 50, out of a corresponding total practice population of 48,260. Therefore the percentage of known Type 2 diabetic patients aged under 50 years was 0.17%, yielding a rate in this age group of 169.91 per 100,000. 747 of the known Type 2 diabetic patients in this study were aged 50 plus, out of a total practice population of 22,519. Therefore the percentage of known Type 2 diabetic patients aged 50 years and over was 3.32%, yielding a rate in this age group of 3,317.2 per 100,000.

When the median ages for each type in this sample were tested they were found to be significantly different ($p < 0.0005$) with a median age for Type 1 Diabetes = 45 and a median age for Type 2 Diabetes = 68.

Non-Participants: There were 25 non-responders out of 52 (48%). 9 (36%) were single-handed, 16 (64%) worked in group practices. 23 (92%) were computerised of whom 6 (24%) were fully and 17 (68%) partially. 14 (56%) employed a practice nurse. All employed a secretary. 19 (76%) were urban and 6 (24%) were rural. All non-responding practice premises were geocoded using the 2002 SAHRU deprivation index. Statistical analysis revealed no significant difference in the area based deprivation scores of participating and non-participating practices.

DISCUSSION

The profile of Type 1 Diabetes demonstrates a very different age profile to that exhibited by Type 2 Diabetes. However it is not true to say that there is no association between age and Type 1 Diabetes in this study. Three broad peaks are evident in the age distribution on Type 1 Diabetes around the early 20s, early 40s and late 60s. This study clearly shows that the prevalence of Type 2 Diabetes Mellitus is related to age, with the majority of cases occurring in older age groups. This finding is expected, as Diabetes has been noted to be one of the most common chronic diseases suffered by elderly people.¹³

It is unfortunate that some significant studies examining Diabetes are not able to differentiate between Type 1 and Type 2 Diabetes.¹⁴ However, the crude known prevalence of Type 1 diabetes identified in this study (0.3%) is somewhat higher than that identified by Morris et al.¹⁵ in an audit and research study examining Diabetes prevalence in Tayside, Scotland which noted a crude known prevalence of Type 1 Diabetes 0.21%. It is interesting to note though that the age profile exhibited in this study in the Mid-West shows a more even distribution across both younger and older age groups, and appears to demonstrate an older average age among Type 1 diabetics than that found in the Tayside study.¹⁵

The crude rate of Diabetes identified in this study (1.45%) is broadly comparable with the crude prevalence rate found in a similar study conducted in the north of England which reported a crude prevalence of 1.7%.¹⁶ Examining Type 2 Diabetes, comparisons between the findings of this known prevalence study and other Irish studies examining Diabetes prevalence are difficult, given differing methodologies and the varying age groups



involved. Whereas this study focussed on already known diabetic patients, both Perry et al.⁸ and the Smith et al.⁹ actively searched for known and potential diabetic patients among general practice populations. However some comparisons are still possible. Smith et al.⁹ noted that 7.1% of those over 40 years of age presenting at GP surgeries had previously been diagnosed with Diabetes. The fact that this is more than double the percentage of older diabetic patients (50 plus years) identified in this study (3.32%) may relate to the higher use of health and medical services by these patients. Perry et al.⁸ It is notable that 28 out of the 40 diabetic patients identified in their study (out of a study population of 1,018) had already been diagnosed with Diabetes, representing a rate among the 50-69 year age group studied of 2.8%. The higher rate found in this study may result from the inclusion of people aged 50 years and over, rather than being restricted to the 50-69 year old cut-off employed by Perry et al.⁸

Although extreme caution is needed in extrapolating from the findings of this study, it is interesting to note the difference between known and unknown diabetics recorded in the study of CVD risk factors, including Diabetes, conducted in the neighbouring counties of Cork and Kerry.⁸ This study noted that among the diabetic patients identified in this 50-69 year old population, 70% were previously known to have the disease, while a further 30% had not previously been diagnosed. Smith et al.'s study examining Diabetes prevalence in Ireland noted that 23.5% of those identified as diabetic were previously undiagnosed.⁹ Given these findings and a substantial volume of other research that has also noted the routine under-diagnosis of Diabetes,¹⁷ it seems likely therefore that the 'true' level of Diabetes in our study population may be substantially higher. Interestingly the observed gap between known and previously unknown diabetes observed in Cork and Kerry may be relatively low internationally. It has been suggested that up to 50% of patients with Diabetes may be undiagnosed.¹⁸⁻²⁰ Some research that has included an examination of the proportion of diagnosed to previously undiagnosed Diabetes by gender has noted that women may be significantly more likely to suffer from undiagnosed Diabetes.²¹

It is widely acknowledged that Diabetes is severely under diagnosed in the community. Simmons et al.³ have suggested a few explanations for under-diagnosis. These include a lack of community awareness of this issue, the nature of the disease, and the variability in GP case detection. It is also felt that in some countries the existence of a laboratory charge for causal glucose estimation may result in less testing and hence lower known rates. The implications of this under-diagnosis are of course considerable. The UK Prospective Diabetes Study²² noted that up to 30% of newly diagnosed patients with Type 2 Diabetes have evidence of microvascular or macrovascular complications at presentation.¹⁵

Research from the UK,^{14, 23, 24} the USA,²⁵ and elsewhere⁵ has demonstrated that Type 2 Diabetes prevalence rates are increasing. Therefore in terms of future service planning, any assessment based on the data presented in this analysis should attempt to incorporate not only the widespread under-diagnosis of Diabetes, but also acknowledge the growing nature of this problem. Whitford & Roberts²³ have discussed the growth in Diabetes prevalence rates and suggest that these may be the result of: a true increase in Diabetes incidence; changes in population demography (such as age and/or ethnicity); earlier detection as a result of increased screening of high risk groups; improvements in care leading to improved survival; and changes in diagnostic criteria relating to diabetes. In relation to their particular study in North Tyneside, Whitford & Roberts²³ also suggest that



in-migration to a recognised diabetic service may have occurred, as well as increased ascertainment due to developments associated with the diabetes scheme.

Previous research^{8,9} on diabetes prevalence in the Republic of Ireland has focussed in-depth on those aged 50-69 years of age and those over 40 years of age. However it is important to note the early onset of Type 2 Diabetes in some patients. Type 2 Diabetes has in the past been known as 'maturity-onset diabetes'. This research demonstrates the existence of Type 2 Diabetes in patients aged as young as 25 years, while 10% of all known Type 2 diabetic patients noted in this study were under 50 years of age. Given the increasing levels of obesity reported within the Irish population, particularly at younger ages, and the increasingly sedentary lifestyle being lived by many people, an improved focus on younger potential diabetic patients may be essential in future. Particular attention needs to be paid to the potential emergence of Type 2 Diabetes in younger adults given the insidious nature of Diabetes and its adverse effects.

There are a number of limitations to this study. Perhaps most significantly is the acceptable, albeit low response rate of 52%. There was also a tendency for more single-handed doctors as well as those with a practice nurse, who were non-computerised or partially computerised to reply. However figures for non-computerisation, employment of a practice secretary, employment of a practice nurse, numbers of group and single-handed practices, and proportion of urban and rural practices were broadly similar to national figures in the achieved study group.

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PRESENTED

At the Association of University Departments of General Practice in Ireland (AUDGPI) Scientific Meeting in Dublin Castle on March 4th, 2005 by Dr. Ray O'Connor.

FUNDED

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Clinical Research

General Practice

TITLE	Variation in the Known Prevalence of Type 2 Diabetes Mellitus in the Mid-West: A Practice Population Study
AUTHORS	O'Connor, R., ¹ Houghton, F. ² Specialist Training Programme in General Practice, University of Limerick ¹ Department of Humanities, Limerick Institute of Technology, Limerick ²

INTRODUCTION

Diabetes Mellitus, especially Type 2 disease, is an increasingly common and important condition worldwide. It is associated with many preventable complications, especially vascular.^{1,2} It has been estimated that the actual prevalence of Type 2 Diabetes in the general Irish population aged between 50 and 69 years is 4.7%.^{3,4} This is probably an underestimate. The prevalence of the condition increases with age.⁵ Many people with Type 2 Diabetes remain undiagnosed.^{4, 5, 6}

HSE West is currently in the process of setting up a Diabetes register, which will aid the call/recall system necessary for delivery of preventive Diabetes care to the population. To enable this process, practices will need to identify all their diabetic patients.

OBJECTIVE

The Mid-West Diabetes study looked at the known prevalence of people with Diabetes in the region among the practices studied. Because of the marked variation of Type 2 Diabetes with age, we studied the known prevalence of the disease in the over 50 age group of all practices. This allowed us to directly compare practices to each other. We then compared these figures with known national prevalence figures.

METHODOLOGY

We approached 52 general practitioners (GPs) registered with the Primary Care Unit of the Mid-Western Health Board with different levels of staffing (secretary and practice nurse), computerisation (full or partial), situation (urban and rural), and organisation (group or single-handed practitioners) that reflected the national picture. 1,030 people with Diabetes were studied, of whom 201 were Type 1 and 829 were Type 2. The known prevalence of Type 2 Diabetes in the over-50 age group for each practice was estimated.

RESULTS

Twenty-seven GPs responded out of a sample of 52, yielding a response rate of 52%.

Table 1 illustrates the percentage of each practice aged over 50 years and the known prevalence of Diabetes in the over 50 age group in each practice.

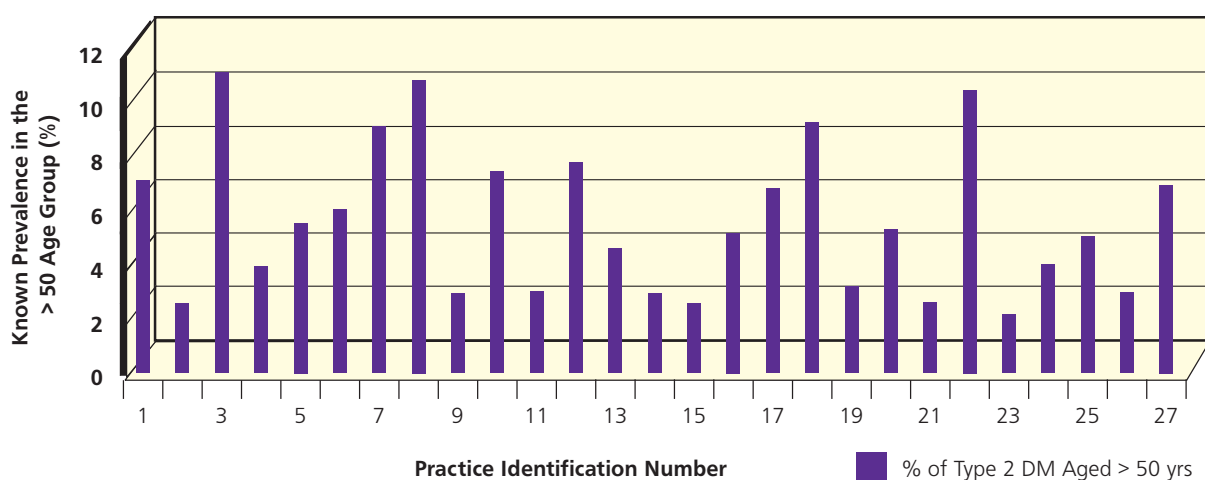
Figure 1 illustrates the known prevalence of type 2 Diabetes in the over 50 age group for all the practices studied. This shows enormous variation between practices with an almost 10-fold difference between the practice with the highest known prevalence (9.95%) and the lowest (1.0%). This difference is of such a magnitude that it cannot solely be the result of differences in the level of deprivation between practice populations. Almost half of the practices studied (13/27) had a known prevalence of Type 2 Diabetes among their over 50 years of age practice population of less than 4%. This may indicate considerable under diagnosis of the disease in these practices.



Table 1 - The % of the Practice Population, and the Known Prevalence of Type 2 Diabetes in the Over 50s Age Group

% of Type 2 DM aged > 50 yrs	% Practice pop aged > 50 yrs
6.00	10
1.24	54
9.95	31
2.77	40
4.27	50
4.90	35
8.00	5
9.67	10
1.73	30
6.27	50
1.85	45
6.58	36
3.33	50
1.76	34
1.41	46
4.04	55
5.62	12
8.15	12
1.94	18
4.13	40
1.40	50
9.29	23
1.00	20
2.78	18
3.88	23
1.70	27
5.76	66

Figure 1 - The Percentage of Patients with Known Type 2 Diabetes in Each Practice



CONCLUSION

There is an enormous variation in the known prevalence of Type 2 Diabetes among practices in the Mid-West. Many patients must remain undiagnosed. Steps need to be taken to address this issue as a matter of urgency.

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PRESENTED

At the Association of University Departments of General Practice in Ireland (AUDGPI) Scientific Meeting in Dublin Castle on March 4th, 2005 by Dr. Ray O'Connor.

Clinical Research

Nursing

TITLE

The Motivation of Nurses to Participate in Continuing Professional Education in Ireland

AUTHORS

Murphy, C., ¹ Cross, C., ¹ McGuire, D. ²

Health Services Management Research Group, Department of Personnel and Employment Relations, University of Limerick, Ireland ¹

School of Management, Napier University Business School, Scotland ²

ABSTRACT

To review the extant literature on Continuing Professional Education (CPE) amongst nurses and concentrate on discovering the factors that motivate and inhibit participation in CPE for nurses in Ireland.

A review of the literature was carried out on continuing professional development amongst nurses in Ireland, the UK, the US and Australia. From this, we developed our research hypotheses. Our primary research concentrated on a cohort of practicing registered nurses participating in a CPE course at a third-level institution in Ireland. We used a questionnaire that contained both open and closed-ended questions. The main barriers to participation in CPE were lack of employer support and the difficulty of balancing home-life, work and study. The main motivators for participation in CPE were improving self-esteem and confidence and the expectation of increased opportunities for promotion for those with higher educational qualifications.

We used a relatively small non-random sample. Therefore the results may be generalized only with caution. A number of implications for the Human Resources Deveopment (HRD) practitioner emerged. These included overt recognition of prior ward-based learning, increased financial support, increased study leave and the need for the HRD practitioner to champion the cause of CPE.

In order to ensure a highly efficient workforce, providing the highest possible standards of care to patients, the health sector needs its workforce to constantly update their knowledge and skills. Therefore it is an important time to consider the factors that aid and inhibit participation in CPE, a common method utilized to achieve this aim.

SOURCE

Journal of European Industrial Training. 2006;30(5):365-384.



Clinical Research

Clinical Services (Physiotherapy)

TITLE	Influence of Instruction Method on Recruitment Ratio of Vastus Medialis Obliques/Vastus Lateralis during a Mini-Squat
AUTHORS	<i>Conroy, C.J., O'Sullivan, K. Physiotherapy Department, Department of Health Sciences, University of Limerick</i>

INTRODUCTION

Instruction and teaching of motor skills is of paramount importance in the role of physiotherapy. Exercises are often prescribed to specific muscle groups in order to strengthen and minimise injury. If performed incorrectly then the strengthening of the targeted muscle group may result in undue strain and added injury. Instruction can be provided in various ways and at particular times. Although there is a considerable amount of research into quality and quantity of feedback and practice regimes there are very few studies focusing solely on instruction and even fewer physiotherapy relevant studies in this area. Thus, clinical application is questionable. Moreover, many studies use complex, co-ordination and open-chain tasks, which vary from the close-chain simple movement exercises physiotherapists often use.^{1, 2, 3, 4, 5} Verbal instruction and visual instruction through modelling are commonly used techniques for clinicians when prescribing home exercise programs.

OBJECTIVES

To investigate the effect of different instruction techniques on muscle activity of the vastus medialis obliques (VMO) and vastus lateralis (VL) while performing a mini-squat.

METHODOLOGY

- Design:** Participants were randomised to one of three instruction groups.
- Setting:** Physical Education and Sports Science (PG-034), University of Limerick.
- Participants:** 30 healthy volunteers were recruited from the student population of the University of Limerick.
- Intervention:** Participants were randomised to receive either a) verbal instruction b) visual demonstration or c) a combination of both instruction methods, while performing a mini-squat exercise.
- Main outcome measures:** Surface electromyographic activity was noted during the mini-squat in each instruction group and this was normalised to maximal voluntary isometric contraction (MVIC) using the Contrex dynamometer. Results are expressed as a percentage of their MVIC.



Figure 1 - Mean % activation of VMO and VL for each group

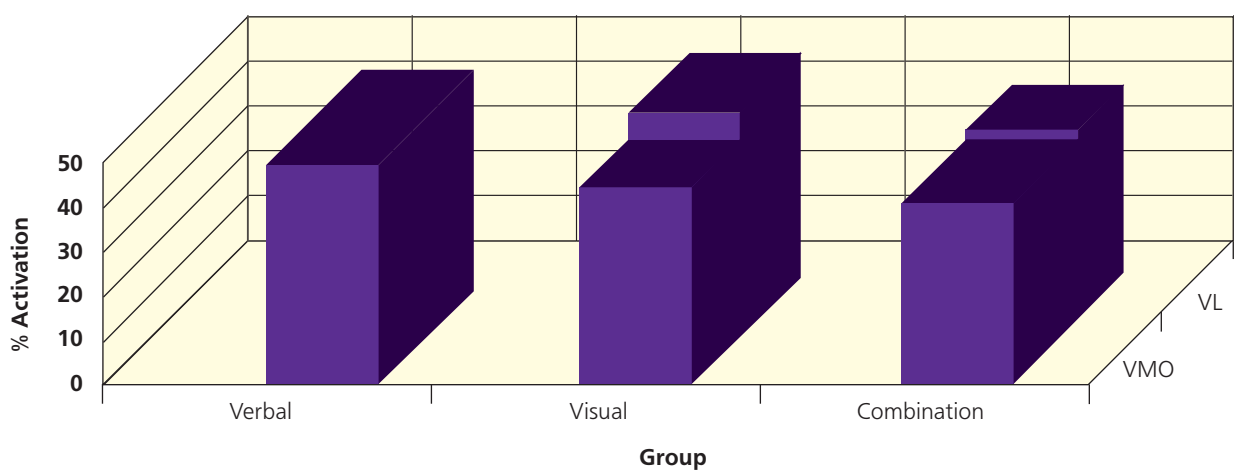
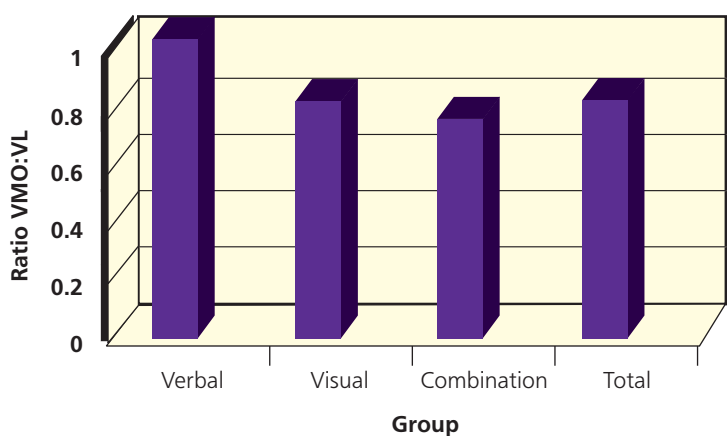


Figure 2 - Mean Ratio VMO:VL for each group and as a total of all groups



RESULTS

To compare data between groups, one way ANOVAs were used ($p < 0.05$). The results did not show any significant difference in muscle activity of VMO, VL or the ratio of VMO: VL, (Figure 1 and Figure 2) between any of the instruction groups. P values of 0.815, 0.732, 0.331 were noted respectively with no trends observed.



CONCLUSIONS

No significant difference was noted in the activity level of VMO and VL when performing the mini-squat under different types of instruction. This finding suggests that instruction type had little influence over the performance of a relatively simple motor task amongst a healthy young population. Factors that have influenced this study includes the following:

The population in this study was healthy young people with no knee pathology or disorders. The absence of a difference in results may have resulted from the task being too simple. Instruction type may have a greater influence within a population of more clinical relevance including those with musculoskeletal disorders of the knee and elderly and further studies may solve this. It has been shown that those with musculoskeletal disorder of patellofemoral pain syndrome (PFPS) have altered feed forward strategies and altered proprioceptive/joint position sense.⁶ Elderly populations have been shown to have decreased kinaesthetic awareness of the knee and ankle joint,⁷ including those with knee osteoarthritis.⁸

The physical properties of the mini-squat may also have affected the study. Confounding evidence re: the variables affecting the optimum performance lead to questionability over the effectiveness of the instruction/demonstration. To address the limitations of this study in further detail further studies may compare the temporal activation and/or kinematic analysis of the squat involving a population with musculoskeletal disorder and/or elderly. This may aid in the evaluation of which is the most effective instruction technique within physiotherapy clinical settings leading to enhanced effective rehabilitation.

Key Messages

Instruction technique was found to have no significant effect on the activation levels of the VMO and VL in the above healthy population. Further studies to address clinically relevant populations may possibly show influence of instruction technique.



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Clinical Research

Clinical Services (Physiotherapy)

TITLE	To Examine the Reliability of the Electrogoniometer to Measure Maximum Knee Flexion during Gait
AUTHORS	<i>McGroary, S., Clifford, A. Department of Physiotherapy, University of Limerick</i>

INTRODUCTION

In a clinical environment restricted knee range of motion (ROM) is a common impairment encountered by physiotherapists. Consequentially physiotherapists in the evaluation of these patients frequently use goniometry as their primary outcome measure.

Previously, reliability of knee goniometry has only been established in relation to passive ROM and in non-weight bearing positions. Measurement of knee movement in a non-load bearing position is an inadequate method of assessing the effectiveness of surgery or rehabilitation of functional joint range.¹ Therefore, in response to the increasing demand for evidence-based practice and optimising clinical effectiveness, there is an increasing demand for a method of establishing the dynamic behaviour of a joint during functional activities.² The flexible electrogoniometer may provide physiotherapists clinically with the ability to record joint range of motion during functional activities. To date there has been no comprehensively reported reliability study to examine the reliability of this device in relation to the knee joint.

OBJECTIVES

The aim of this study is to examine the intra and inter rater reliability of the electrogoniometer to measure maximum knee flexion during gait in healthy college subjects and to examine if there is a statistical difference in the maximum knee flexion achieved with the dominant and non-dominant leg.

METHODOLOGY

A test retest design was implemented. A sample of 25 healthy volunteers was recruited. Participants were measured on two separate occasions as they walked a 14m walkway with data collected from the central 10m. Positioning, attachment of the device, and instructions were all standardised to ensure consistency. Data was analysed using SPSS version 11.0. Interclass correlation coefficients (ICC), 95% confidence Intervals (CI) and the Bland and Altman method were used.

RESULTS

Results indicate reasonable intra rater reliability with an ICC of 0.65, 95% CI of 0.43→0.80, and reasonable inter rater reliability with an ICC of 0.73, 95% CI of 0.55→0.85. Poor agreement is present on both occasions with wide 95% limits of agreement of -6.64°→8.09° and -6.44°→7.76° respectively. Inter rater reliability is moderately more reliable than intra rater reliability.

No statistically significant difference between maximum knee flexion achieved on the dominant and non-dominant leg ($P < 0.05$) was found.



CONCLUSION

The clinical implications from these results suggest that the electrogoniometer is not a reliable tool to measure maximum knee flexion during gait.

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Clinical Research

Clinical Services (Physiotherapy)

TITLE	Intra- and Inter-Rater Reliability of the PowerTrackII Hand-Held Dynamometer in the Measurement of Shoulder Flexion and Elbow Extension Strength
AUTHORS	<i>Cahill, F., Clifford, A. Department of Physiotherapy, University of Limerick</i>

INTRODUCTION

The objective measurement of muscle strength using a reliable tool is important clinically.¹ The current literature on Hand-Held Dynamometers (HHD's) presents with numerous methodological problems which adversely affect reliability.^{2,3} These include inappropriate starting positions, test protocols, and statistical analysis. Tester strength is also important, as the valid use of HHD's is dependent on the tester's ability to accommodate the force output of the subject.⁴

OBJECTIVE

This study was conducted to assess the intra- and inter-rater reliability of the PowerTrackII HHD in the measurement of shoulder flexion and elbow extension among healthy volunteers, incorporating appropriate protocols, starting positions, and statistical analysis.

METHODOLOGY

A test-retest study design was undertaken. Shoulder flexion and elbow extension strength of the dominant arm of 20 healthy volunteers (17 female) was measured using the PowerTrackII HHD, by two examiners over two days. Subjects performed three maximal contractions for each examiner; the mean was used for analysis. Standardised test positions were used. The examiners ability to resist a subject's contraction was also recorded. Intra-class correlation coefficients (ICC's) and 95% limits of agreement were calculated in SPSS 11.0.^{5,6}

RESULTS

The inter- and intra-rater ICC's for the shoulder and elbow ranged from 0.62-0.94 indicating good reliability, however the wide limits of agreement suggest substantial bias and variability. Inter-rater reliability was mixed, with good agreement for elbow extension on day 1 but not on day 2, and poor agreement for shoulder flexion on both days. For intra-rater reliability, examiner 1 shows better agreement than examiner 2, though both show poor reliability when measuring shoulder flexion.



CONCLUSION

Using appropriate protocols, starting positions, and statistical analysis, this study found intra- and inter-rater reliability of this HHD to be mixed. Some possible sources of error that may have contributed to the poor agreement in this study include:

- i) Tester strength; as the examiners had difficulty when resisting the force output of stronger subjects.
- ii) The ability of an examiner to stabilise the dynamometer; as the examiners found shoulder flexion more difficult to stabilise, accounting for its poorer reliability.
- iii) A possible learning effect; as for intra-rater reliability in particular, systematic bias was present. This trend for retests to be higher may be due to a learning effect.

Further investigation is warranted to clarify how HHD testing can be made more reliable, as hand-held dynamometry still has the potential to provide a cheap, simple and more reliable alternative to manual muscle testing.

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PRESENTED

As a Poster Presentation at the Clinical Therapies Research Day at the University of Limerick on September 19th, 2006.



Clinical Research

Mental Health

TITLE	A Qualitative Study of End-Stage Renal Disease Patients' Experience of Haemodialysis and their Mental Health Needs
AUTHORS	<i>Cullinane, E. Crisis Intervention/Liaison Psychiatry, Mid-Western Regional Hospital, Dooradoyle, Limerick</i>

INTRODUCTION

In Ireland liaison mental health nursing which encompasses the interface between the traditional mental health setting and the general healthcare setting, is in its infancy. A unique subset of patients within the general hospital outpatients is that of patients on haemodialysis. The role of the mental health nurse is to meet the mental health needs of this particular group. Patients on maintenance haemodialysis must undergo a lifelong medical therapy to compensate for the loss of renal function until they receive a transplant or die.

OBJECTIVE

To generate a rich description of the lived experience of patients with end-stage renal disease (ESRD) on haemodialysis and determine what coping mechanisms they use.

METHODOLOGY

Husserlian phenomenology was employed. Semi-structured interviews were conducted with nine participants. Data was analyzed using Colaizzi's (1978) framework.

RESULTS

Eight themes emerged from the analysis, which were further subdivided. These were, 'the positive aspects of haemodialysis', 'perceptions of support', 'barriers to support', 'the impact of the physical environment for haemodialysis patients', 'the perceived restrictions experienced on haemodialysis', 'impact of haemodialysis', 'the attitude to primary cause of ESRD' and 'coping strategies'. These themes were further subdivided. Overall, the study found that some participants had psychological problems with their circumstances. There was some suggestion of denial, projection and depression among respondents. This was related, to inappropriate coping techniques and, secondly, to a lack of social support which might be attributed to a lack of psycho-education on the part of the patient, family, work colleagues and social contacts.

CONCLUSION

The undertaking of this study provided valuable insights into the lived experience of patients on haemodialysis and the coping strategies adopted. A number of recommendations arising from the themes were made for further research and nursing practice. It was recommended that there be a follow up study exploring staff perceptions of patients' needs. Adjuvant psychological therapy for patients in need of psychological support was recommended. Further enhancement of the Clinical Nurse Specialist (CNS) role to liaise between the unit, the patient and psychological support systems was also recommended.



PRESENTED

As a Poster Presentation at the "Person Centred Developments in Nursing and Midwifery Conference" held in the Bunratty Shannon Shamrock Hotel, Bunratty, Co. Clare on April 26th, 2006.



Clinical Research

Mental Health

TITLE	Bullying Experiences of One Post-Primary School in a Semi-Rural Location in Ireland
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AUTHORS	<i>Mangan, E.,¹ Coleman, D.,² Ryan, P.³ Clinical Psychology Service, HSE West, North Tipperary^{1,2} Department of Education and Professional Studies, University of Limerick³</i>
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INTRODUCTION

This study examined the prevalence and form of bullying within one post-primary school in a semi-rural location in the Midlands of Ireland.

OBJECTIVE

The study undertook to add to our knowledge of bullying in schools outside of urban districts where the majority of research has been undertaken to date.

METHODOLOGY

A total of 207 (43% male, 56% female) secondary school pupils completed a bullying questionnaire. This sample accounted for 44.3% of the total school population.

RESULTS

41% of participants reported having experienced bullying in school in the past. The most prevalent forms of bullying were peer rejection (12%) and bullying using either phone or text (12%).

CONCLUSIONS

These high levels may present a challenge to schools on account of their covert nature and reduced visibility within the school environment, making these forms of bullying more difficult to address. Overall the study showed a higher incidence of bullying than other research (e.g. O'Moore et al, 1997) into bullying in Ireland.



Clinical Research

Mental Health

TITLE	An Evaluation and Comparison of the Relationship between Olfactory Function and Cognitive Ability - A Pilot Project
AUTHORS	<i>Gillan, D.,¹ Wale, S.,² Ryan, P. ¹ Doctorate Programme in Clinical Psychology, Department of Professional and Educational Studies, University of Limerick ¹ Mental Health Services for Older People, Health Service Executive (HSE) West, St. Camillus Hospital, Limerick ²</i>

INTRODUCTION

A relationship between olfactory function and cognitive abilities has been postulated based on the proximity of these areas in the brain (Westervelt et al. 2005).¹ Several studies have found odour identification deficits among people living with dementia, particularly among those with Alzheimer's Disease (AD). Previous work by McShane (2001)² and Westervelt et al. (2003)³ indicates that odour identification deficits are more prevalent and severe in people living with DLB (dementia with lewy bodies), than in people living with AD. They explain these findings in terms of the presence of lewy bodies in the entorhinal cortex, which is presumed to be involved in the processing of olfactory information (Westervelt et al. 2003). As a result of these findings, Westervelt maintained that olfactory identification may be a useful assessment in differentiating the two types of dementia.

OBJECTIVE

It is particularly important to differentiate DLB from other types of dementia because of the prospect of better response to drugs such as cholinesterase inhibitors (Knopman et al. 2001) ⁴. Among patients with DLB, adverse reactions to neuroleptic medication have been documented (Knopman et al.) which is frequently administered to patients with dementia.

Therefore, it was decided to conduct an exploratory study in an Irish context in order to clarify the finding that DLB patients score significantly lower on measures of olfactory function than AD patients and to extend this very small literature. It was also decided to take demographic variables and smoking status into account.

METHODOLOGY

Potential participants were identified from the database of outpatients presenting with dementia who were attending the Old Age Psychiatry Services, Health Services Executive (HSE) West, based at St. Camillus Hospital, Limerick. Patients who had received a diagnosis of either AD or DLB and who also fitted the selection criteria were selected for this study. AD was diagnosed using the ICD-10 criteria. DLB was diagnosed using the revised Newcastle criteria (Mc Keith et al. 2005).⁵

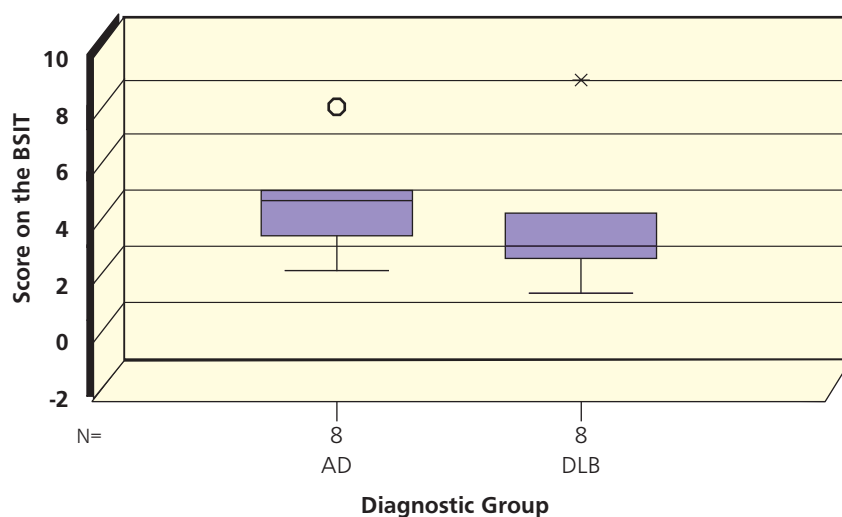
All participants had MMSE scores of less than 24. Exclusionary criteria included: previous head trauma, smoking habit, self-report of long standing anosmia; significant nasal congestion at the time of the exam; or self-report of hypersensitivity to odours.

Sixteen patients (eight per group) underwent assessment with the Brief Smell Identification Test (BSIT; Doty, Marcus & Lee, 1996) ⁶ a 12-item measure of odour identification, and the Mini-Mental State Examination (MMSE), a screening test for dementia in the elderly. Participants ranged in age from 69 to 84, and were matched as closely as possible on demographic variables and on MMSE scores.

RESULTS

The results showed that patients did not differ in median score on the BSIT ($p = .195$). An additional test of sensitivity and specificity also confirmed that BSIT scores were unable to discriminate between AD and DLB. Therefore, there was no significant difference in olfactory identification ability between the two groups.

Figure 1 - Median and Range of Scores on the BSIT as a Function of Diagnostic Group



CONCLUSIONS

This study contradicts findings from Westervelt et al.'s (2003) study, which found a significant difference in olfactory ability between patients with probable DLB and patients with probable AD. There is a need for an objective, yet clinically useful assessment to assist in the early detection and discrimination of dementia from other psychiatric illnesses, as well as for distinguishing between dementia subtypes. Various researchers have advocated for the use of odour identification tests such as the BSIT as an adjunctive measure to augment clinicians' diagnoses.

As this was an exploratory study, the sample size was very small, which meant that power to find a difference by diagnosis was quite low. Replication of this study with a larger sample should be conducted before the efficacy of this smell test in distinguishing between types of dementia is clarified.

PRESENTED

At SIGN (Special Interest Group in Neuropsychology) Symposium at the Psychological Society of Ireland (PSI) Annual Conference in Galway on November 9th-12th 2006, by Miss Diane Gillan.



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Clinical Research

Mental Health

TITLE	Evaluation of the Parent Plus Early Years Programme
AUTHORS	<i>Brain, K.,¹ Fitzsimons, S.,¹ Ward, M.,¹ Shaw, J.² Clinical Psychology Service, HSE West, Ennis, Co. Clare ¹ Clare Care, Harmony Row, Ennis, Co. Clare ²</i>

INTRODUCTION

"Parenting is probably one of the most important jobs that many of us ever do and yet we receive virtually no preparation, no training and very little support" (De 'Ath, 1983). In recent years the need for structured parent training and support has become increasingly recognised. An understanding that parenting styles and the quality of parent-child interactions and relationships are central to the development of emotional and behavioural difficulties in children and adolescents has also been developed. Subsequently, a number of intervention programmes have been created to address this issue. The Parents Plus Early Years Programme (PPEY; Sharry, Hampson & Fanning, 2003) is one such intervention developed in an Irish context.

OBJECTIVES

This research sought to evaluate the effectiveness of the Parents Plus Early Years Programme (PPEY; Sharry, Hampson & Fanning, 2003) in reducing clinically significant behavioural problems as measured by the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997) to a non-clinical level, in young children aged between 1-5 years. It also sought to evaluate the impact of the programme in facilitating movement towards pre-defined goals for both parents and children as measured by Parent and Child Goal Scales (PCGS, Sharry et al, 2003).

METHODOLOGY

This study used a repeated measures design in order to identify significant changes in children's behaviour and movement towards parent-identified goals following parental participation in PPEY programme. 17 mothers of children aged 1-5 years participated in two separate PPEY groups jointly facilitated by Clare Care and Clinical Psychology Services in Co. Clare. No fathers participated in the programme and only 16 of the 17 mothers initially recruited completed the post-group measures. Participants engaged in a programme of group-based, video-modelling behavioural parent training over 8 consecutive weeks, in which they were taught new strategies for managing and solving child discipline problems using behaviourally based techniques. Participants were encouraged to review their progress and openly discuss their experiences of trying to implement behavioural parenting skills with their own children between sessions.

RESULTS

Results from the Strengths and Difficulties Questionnaire (SDQ) showed a significant reduction in conduct problems and in the 'Total Difficulties' score. A significant increase in pro-social behaviours and a significant improvement in peer relationships were also identified.

Additionally, the percentage of children obtaining scores with the 'normal' range of each of the five subscales of the SDQ increased following parent's participation in PPEY programme. The percentage of children obtaining scores in the 'abnormal' range also decreased on four of the five subscales.



In terms of achievement of goals, all 16 mothers surveyed universally confirmed that attending the course had helped them achieve both their personal goals as parents and their goals for their child. They were also unanimous in noticing positive changes in both their child's behaviours and in their own behaviour as parents across the 8-weeks. Participants also provided universally positive feedback on the time, location and content of the programme and qualities of the facilitators.

CONCLUSION

These results appear to support the effectiveness of the Parents Plus Early Years Programme in helping mothers to manage behavioural difficulties in their pre-schooler. Additionally, the results point to positive improvement in parent-child interactions, which is consistent with the stated objectives of the PPEY programme.

However, in keeping with previous research (Sharry et al, 2005) these results also point to the need to consider alternative models of service delivery to appeal to fathers to facilitate and increase their participation in future parenting initiatives. This would enable exploration of the impact of father participation in behaviour-based parent training on child behaviour.

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ACKNOWLEDGEMENT

This project was conducted under the supervision of Dr. Patrick Ryan, Course Director, Doctorate in Clinical Psychology, School of Education, University of Limerick, Ireland.



Clinical Research

Biomedical Engineering

TITLE	Assessment of Biocompatibility of an Acellular Scaffold Derived from Porcine Urinary Bladder Membrane Utilizing L 929 in a Novel Bioreactor
AUTHORS	<i>Shaikh, F.M.,^{1,2} O' Brien, T.P.,² Callanan, A.,² Badalyk, S.F.,³ Kavanagh, E.G.,^{1,2} Burke, P.E.,^{1,2} Grace, P.A.^{1,2} McGloughlin, T.² Department of Surgery, Mid-Western Regional Hospital, Limerick ¹ Materials and Surface Science Institute, University of Limerick, Limerick ² McGowan Institute for Regenerative Medicine, Pittsburgh, Pennsylvania, USA ³</i>

INTRODUCTION

Biocompatible scaffolds seeded with cells are an important development in the field of tissue engineering. Bioscaffolds derived from xenogeneic extracellular matrix have been successfully used in numerous tissue engineering applications. As an initial step in the development of small diameter vascular grafts, the in vitro biocompatibility of porcine UBM (Urinary Bladder Membrane) was assessed in this study using L929 fibroblasts in a novel bioreactor.

METHODOLOGY

L929 cells were seeded onto a sheet of UBM in a petri dish and after 24 hours of culture were transferred to a variable pressure bioreactor while controls were grown in tissue culture flasks. The bioreactor controlled the temperature, atmosphere and pressure conditions under which the constructs were grown. Various aspects of cellular growth were analysed in order to establish the biocompatibility of UBM. Cell morphology was studied using optical and scanning electron microscopy. Cell viability was assessed using live-dead immunofluorescence and mitochondrial activity was determined using the MTT assay.

RESULTS

Optical and scanning electron microscopy demonstrated good cell and matrix integrity. Live-dead immunofluorescence confirmed viable cells on the UMB and MTT assay indicated mitochondrial active cells. The results demonstrated L929 growth, adhesion, viability, morphology and mitochondrial activity on the UBM.

CONCLUSION

The results suggest that UBM has a potential as a biocompatible natural acellular scaffold capable of performing within physiologically realistic environments. Future work will focus on the preparation of a hybrid scaffold using L929 fibroblasts and endothelial cells and determining the influence of pressure on the behaviour of the co-construct.

PRESENTED

At the 31st Sir Peter Freyer Memorial Lecture and Surgical Symposium in Galway on September 1st by Dr. Faisal Shaikh.



Population Health

Public Health

TITLE	Health of Informal Carers: Analysis of Irish 2002 Census Data
AUTHORS	<i>Houghton, F., Cowley, H., Kelleher, K. Department of Public Health, HSE West, Limerick</i>

INTRODUCTION

The plight of informal Carers has long been recognised as an important issue in Ireland.¹ Concerns over Carers have focussed particularly on their isolation, distress²⁻⁵ and lack of support,⁶⁻⁷ as well as the deprivation and poverty they often experience.⁸ The difficult role of Carers has both been the subject of a number of national reports,⁹⁻¹⁰ and has been specifically discussed in various health strategies.^{1,11-12} Irish pressure groups such as the *Carers Association* and *Caring for Carers* have helped to focus attention on this topic. The strength of concern over this issue can be seen in the inclusion of a question on this topic in the 2002 Census.

Recent analysis of data from the UK 2001 Census has identified significantly more older and younger people acting as unpaid informal Carers than previously thought.¹³ Analysis of the UK Census has also illustrated how a significant proportion of informal Carers were not only aged, but were also engaging in Caring roles for extended periods, while themselves suffering from ill-health.

OBJECTIVE

Using data from the 2002 Census, this study sought firstly to determine the number of Carers identified in the Census by age and gender. Secondly this study sought to explore the health status of Carers, using data from the newly added health questions in the Irish Census.

METHODOLOGY

Analysis was conducted on data from the 2002 Census of Ireland obtained from the Central Statistics Office. This analysis examined three of the newly included questions in the Census, as well as more routinely collected data on age and gender. Two of the new questions in the 2002 Irish Census focused on health issues.

The first health question (Q.14) was comprised of two sub-questions and examined long lasting health conditions. The first of these (Q.14a) asked respondents aged 5 years and over whether they had any of the following long lasting conditions: *'blindness, deafness or a severe vision or hearing impairment?'* The second sub-question (Q.14b) similarly asked respondents if they had a long lasting condition that *'substantially limits one or more basic physical activities such as walking, climbing stairs, reaching, lifting or carrying?'*

The second new health question (Q.15) had four sub-parts, and focused on activities of daily living, asking respondents if *'because of physical, mental or emotional condition lasting 6 months or more, do you have any difficulty in doing any of the following activities: Learning, remembering or concentrating?; Dressing, bathing or getting around inside the home?; Going outside the home alone to shop or visit a doctor's surgery?; Working at a job or business?'*

This study also examined responses to the new Carers question which asked respondents *'do you provide regular unpaid personal help for a friend or family member with a long-term illness, health problem or disability?'*

RESULTS

Analysis of the Irish 2002 Census identified 148,754 people working as unpaid carers for one or more hours per week. This question was asked of the population aged 15 years and over and therefore represented 4.8% of people in this age group. 16,571 of these unpaid Carers were aged 65 plus (11.1%), while 132,183 were aged between 15-64 (88.9%).

Table 1 - Number of informal Carers and Duration of Caring Activities per Week by Age and Gender

	Total Population	Total Carers	Number of hours spent caring			
			1-14	15-28	29-42	43 or more
15-64 years	2,653,774	132,183	78,742 (59.6%)	14,127 (10.7%)	7,061 (5.3%)	32,253 (24.4%)
Male 15-64	1,332,965	50,874	32,336 (63.6%)	5,312 (10.4%)	2,786 (5.5%)	10,440 (20.5%)
Female 15-64	1,320,809	81,309	46,406 (57.1%)	8,815 (10.8%)	4,275 (5.3%)	21,813 (26.8%)
65 years plus	436,001	16,571	6,120 (36.9%)	1,282 (7.7%)	896 (5.4%)	8,273 (49.9%)
Male 65 plus	189,155	6,606	2,639 (39.9%)	550 (8.3%)	356 (5.4%)	3,061 (46.3%)
Female 65 plus	246,846	9,965	3,481 (34.9%)	732 (7.3%)	540 (5.4%)	5,212 (52.3%)
15 years plus	3,089,775	148,754	84,862 (57.0%)	15,409 (10.4%)	7,957 (5.3%)	40,526 (27.2%)
Male 15+	1,522,120	57,480	34,975 (60.8%)	5,862 (10.2%)	3,142 (5.5%)	13,501 (23.5)
Female 15+	1,567,655	91,274	49,887 (54.7%)	9,547 (10.5%)	4,815 (5.3%)	27,025 (29.6%)



The arduous nature of the caring role is apparent from Table 1, particularly in relation to older people. 32,253 people aged 15-64 years were routinely engaged in a Caring role for 43 or more hours per week. However an issue of particular concern must be the heavy burden of Caring on those aged 65 plus. A total of 8,273 people in this age group reported routinely acting as a Carer for 43 or more hours a week. The gendered nature of the Caring role is clearly apparent from Table 1. Chi-square analysis revealed that women were significantly more likely to be Carers in both the younger ($\chi^2 = 7671$, $df = 1$, $p < 0.00001$), and older age groups examined ($\chi^2 = 86.72$, $df = 1$, $p < 0.001$).

Table 2 - Health of Informal Carers and the General Population by Age Group

	Do you have any of the following long-lasting conditions:		Because of physical, mental or emotional condition lasting 6 months or more, do you have any difficulty in doing in any of the following activities:			
	Q.14A Blindness, Deafness	Q.14B Limit Physical Activities	Q.15A Learning, Remembering, Concentrating	Q.15B Dressing, Bathing	Q.15C Going outside alone	Q.15D Working
Carers 15-64	2,252 (1.7%)	5,290 (4.0%)	2,949 (2.2%)	1,297 (1.0%)	1,858 (1.4%)	6,216 (4.7%)
Others 15-64	30,603 (1.2%)	74,537 (3.0%)	49,869 (2.0%)	28,140 (1.1%)	42,728 (1.7%)	97,259 (3.9%)
All 15-64	32,855 (1.2%)	79,827 (3.0%)	52,818 (2.0%)	29,437 (1.1%)	44,586 (1.7%)	103,475 (3.9%)
Carers 65+	1,499 (9.0%)	2,933 (17.7%)	1,004 (6.1%)	1,166 (7.0%)	1,683 (10.2%)	2,290 (13.8%)
Others 65+	39,916 (9.5%)	88,052 (21.0%)	40,524 (9.7%)	51,819 (12.4%)	71,873 (17.1%)	75,505 (18.0%)
All 65+	41,415 (9.5%)	90,985 (20.9%)	41,528 (9.5%)	52,985 (12.2%)	73,556 (16.9%)	77,795 (17.8%)

Table 2 details the health status of Carers and Others in the 15-64 and 65 plus age groups. It is an issue of serious concern that in the 15-64 years age group, 2,252 Carers reported that they had a long lasting condition that severely affected their vision or hearing, while 5,290 Carers reported a long lasting condition that limited their physical activities. Chi-square analysis revealed that Carers in the 15-64 age group were significantly more likely to suffer severe hearing or vision problems than Others ($\chi^2 = 243.9$, $df = 1$, $p < 0.001$). Similar analysis also



revealed that Carers in this age range were also significantly more likely than Others to suffer from a long lasting condition that limited their physical activities ($\chi^2 = 470.7$, $df = 1$, $p < 0.0001$). The number of Carers in this age range experiencing limitations in performing activities of daily living is also a serious concern.

Chi-square analysis revealed that Carers in the 65 years plus age group were significantly less likely to suffer from either of the long lasting conditions examined in the Census, or to report curtailments in any of the four activities of daily living than Others in the same category. Nevertheless 1,499 such Carers reported having a long lasting condition that severely affected their hearing or vision, while 2,933 such Carers reported having a long lasting condition that limited their physical activities. The numbers of older Carers that reported experiencing restrictions in their ability to perform daily activities remains problematical.

These issues take on added importance when a further examination of the duration of Caring activities is undertaken. 53.2% ($n = 798$) of Carers aged 65 and over who reported having severe hearing or visual difficulties were engaged as Carers for 43 or more hours per week. Similarly 52.1% ($n = 1,529$) of older Carers who reported having a long lasting condition that limited their physical activities were engaged in a Caring role for 43 or more hours per week. 52.8% ($n = 530$) of older, full-time Carers reported having difficulties in learning, remember or concentrating, while 50.7% ($n = 591$) reported difficulties in dressing and bathing. Furthermore, 53.8% ($n = 905$) of older full-time carers reported difficulties in going outside alone, while 54.8% ($n = 1255$) reported difficulties working.

CONCLUSIONS

The number of Carers identified in the Irish 2002 Census (148,754) is substantially higher than the estimate of 120,000 Carers that has been routinely quoted in Ireland,¹⁴ although estimates have varied.¹⁵ Although this figure is higher than anticipated, it may actually still be an under-estimate. One serious problem with the data collected in the Irish 2002 Census relates to the exclusion of the under 15 years age group. Although it may be easy to discount this out of hand, recent evidence from the UK, where Carers aged 5 years and over were examined in the 2001 Census, identified approximately 114,000 children providing informal care (representing 1.4% of children aged 5-15).¹³ 18,000 of these children provided 20 or more hours of informal care per week, while 9,000 provided at least 50 hours, which is unacceptable.

The 2002 Census identified that there was a substantial number of older people acting as Carers (16,571), many of whom were engaged in this capacity for protracted periods of time per week. The Census, as anticipated, also identified that although there are many male Carers, this role is significantly more likely to be undertaken by women.¹⁶

The poor health status of both younger and older Carers, particularly when combined with the extended Caring roles undertaken by many, must be addressed. Serious attention needs to be given to fully supporting Carers both in terms of their own needs, and in terms of their role as Carers of others.



It should be noted that the simple cross-tabular analysis undertaken in this study does not take account of multiple disabilities and restrictions on activities of daily living that many Carers may experience. Further research, particularly from a more individual perspective, using qualitative methodologies, may help to explore, understand and prescribe appropriate responses to the needs of Carers.¹⁷

It is interesting to note that although the UK and Ireland each asked questions on informal Caring in their last Census, dramatically different rates of Carers were identified. As mentioned above 4.8% of people aged 15 years and over in Ireland identified themselves as Carers. However double this percentage (9.9%) of people in the UK identified themselves as Carers. It is interesting to try and identify the reason behind the substantial difference in these rates. It is possible that the Caring role may fall more centrally to just one person in Ireland, whereas it may be more evenly spread in the UK. Alternatively, this finding may result from differences in service provision or benefit structures between the UK and Ireland.

However a more simple explanation may lie in the differing wording of the questions asked on the two Census forms. The UK Census asked people *'do you look after, or give any help, or support to family members, friends, neighbours or others because of long-term physical or mental ill-health or disability, or problems related to old age? Do not count anything you do as part of your paid employment'*. Whereas the Irish Census question, as mentioned earlier, asked *'do you provide regular unpaid personal help for a friend or family member with a long-term illness, health problem or disability?'*. Irish respondents were told to *'Include problems which are due to old age'*, and were told that the receipt of Carers Allowance was not considered payment for the purposes of this question. Respondents were also told that *'Personal help includes help with basic tasks such as feeding or dressing'*. Comparing these questions, two points become clear. Firstly the relevant UK Census question uses the term *'any'* help or support, whereas the Irish Census question asks about *'regular'* help.¹⁸ Additionally, it is clear that the Irish Census question, which explicitly mentions basic tasks, such as feeding or dressing, focuses on more intimate personal care activities. It may be that more general support and assistance such as gardening, cutting someone's grass or taking someone's dog for a walk was more likely to be counted as caring in the UK census, rather than the Irish Census.

Significant geographic differences in the proportion of Carers were also noted throughout England and Wales.¹⁸⁻¹⁹ Particularly high rates were noted in Local Authorities in South Wales, while the 10 UK Local Authorities with the lowest rates were all Inner London Boroughs. Preliminary research in Ireland on this issue has also identified similar spatial variations.¹⁸ Further research into spatial differences in informal caring roles in Ireland may help to understand and respond to the needs of Carers.

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Population Health

Public Health

TITLE	Needs Assessment Survey of People with Acquired Brain Injury in the Mid-West Region
AUTHORS	<i>Ross, P., ¹ Mac Mathúna, L. ² Insight Statistical Consulting, 7 Lower Fitzwilliam St, Dublin 2 ¹ Disability Services Directorate, HSE West, Limerick ²</i>

INTRODUCTION

Due to the increase in Traumatic Brain Injury (TBI) cases presenting to services arising, primarily, from the national increase in Road Traffic Accidents (RTAs) and the increased survival rate of TBI and Stroke (CVA) cases a heightened focus on the adequacy of service provision to people with an acquired brain injury (ABI) has arisen.

The following sub-groups of people with ABI have been identified:

- Traumatic Brain Injury (TBI)
- Non-Traumatic Brain Injury (NTBI), including; Stroke (CVA), Anoxia and Hypoxia, Haemorrhage, Tumour and Infection
- Alcohol Related Brain Injury (ARBI)
- Substance Related Brain Injury (SRBI)

OBJECTIVE

In order to inform effective planning and development of future service provision a social scientific assessment of the extent of need among people with ABI in the region required to be undertaken.

METHODOLOGY

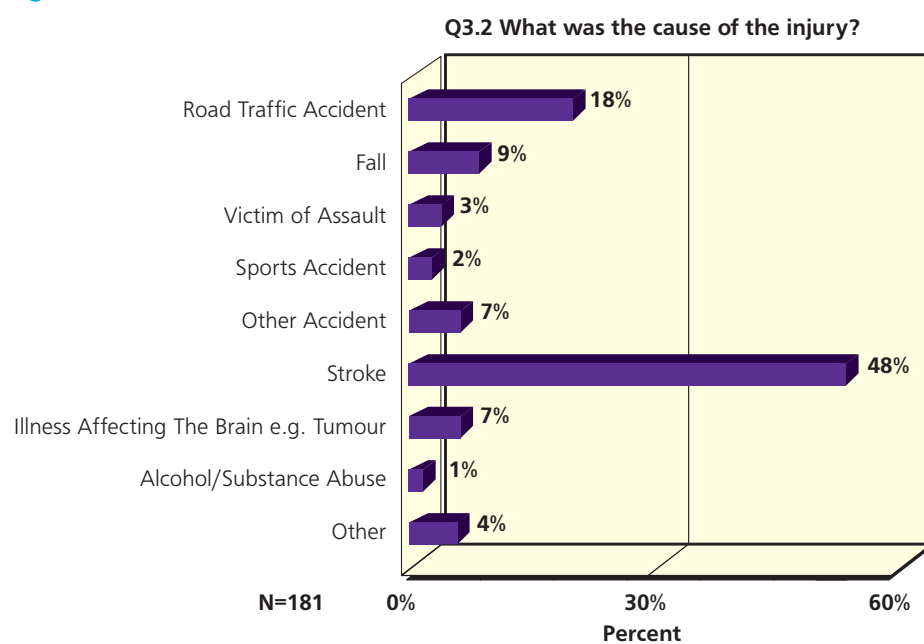
The survey was conducted in two main phases:

1. Adapted Census of ABI population in Mid-West region:
By accessing a number of computer databases an adapted census of the ABI population in the region under the age of 66 years was compiled.
2. Needs assessment survey of this population:
The survey questionnaire was divided into five sections relating to the person with ABI and a final section relating to the principal carer. The database developed from the census phase was used as the sampling frame. The questionnaire was administered through a combination of postal self-completion (of those previously identified as of lesser dependency) and personal interview (of those with higher dependency).

RESULTS

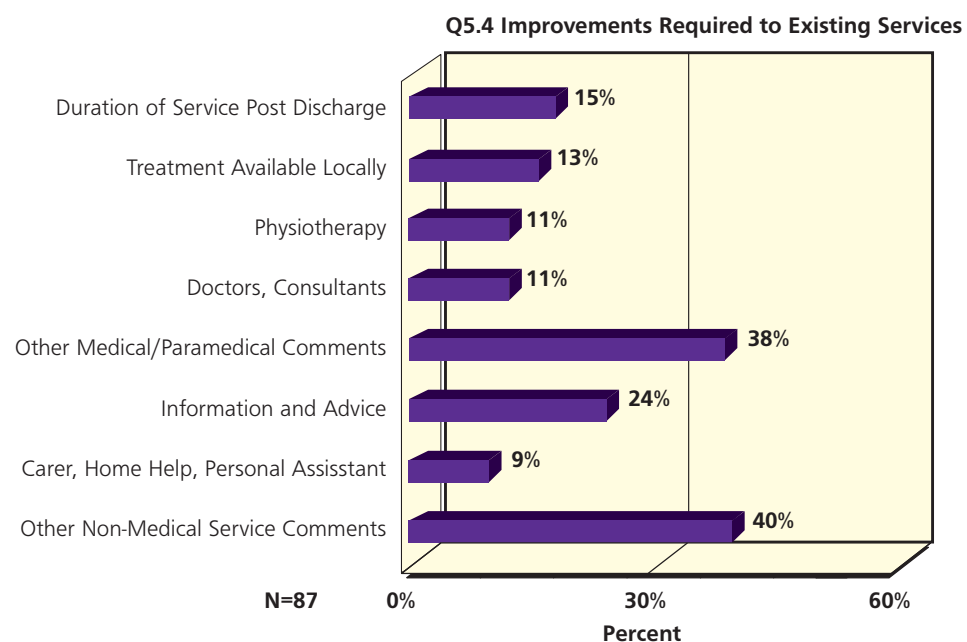
The respondent profile indicated that, overall, 42% of respondents had a TBI and 58% had some form of NTBI (see Figure 1):

Figure 1 - Cause of ABI



The average age of respondents with a Traumatic Brain Injury was 27 years old compared to 45 years old for respondents with a Non-Traumatic Brain Injury. Respondents were also requested to indicate suggestions for service improvement (see Figure 2):

Figure 2 - Recommended Improvements to Existing Services

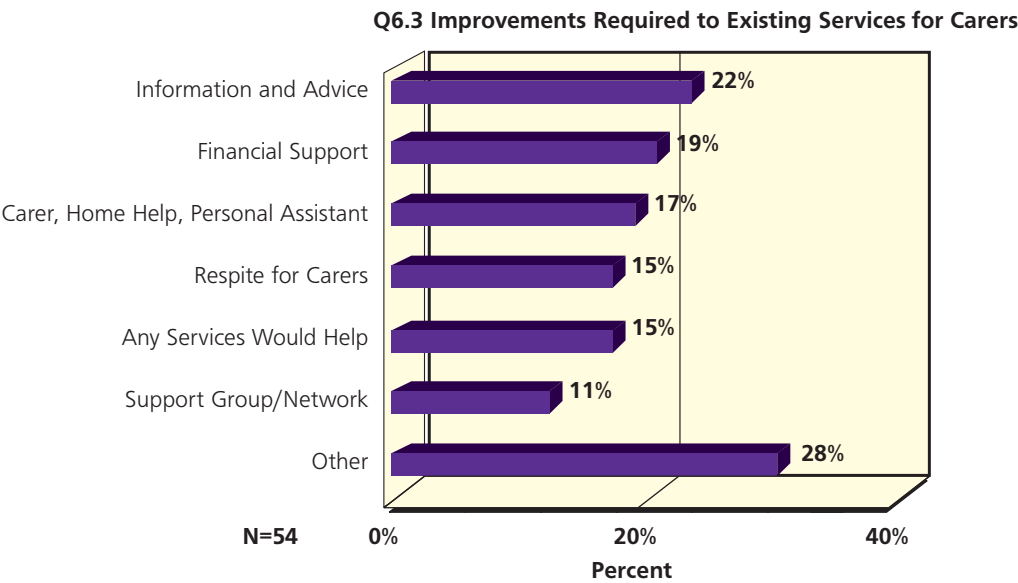




Particular dissatisfaction was expressed at the lack of appropriate rehabilitation and neurology services. Requests were frequently made for greater provision of support groups; counselling and information and advice services.

Carers were also surveyed on their opinion of services and suggested the following improvements to existing services (see Figure 3).

Figure 3 - Improvements Required to Existing Services for Carers



RECOMMENDATIONS

The survey indicated that an appreciable improvement in the availability and frequency of service provision for medical/paramedical and community (non-medical) services is required.

Greater provision of the following medical supports for people with ABI is required:

- Rehabilitation services
- Neurology services
- Physiotherapy services
- Speech and Language services
- Optician services



Greater provision of the following community (non-medical) supports for people with ABI is required:

- Support Groups
- Information and Advice Services
- Rehabilitative Training Services

Enhanced provision of services to carers includes:

- Information and Advice Services
- Financial Support
- Home Help/Personal Assistants
- Respite Services

CONCLUSIONS

The needs assessment survey has indicated the need for the Disability Services Directorate to develop a more comprehensive and broad-based range of services for people with an acquired brain injury.



Population Health

Health Promotion

TITLE	Impact of Hepatitis C on Health-Related Quality of Life – An Irish Perspective
AUTHORS	Mc Kenna, O., ^{1,2} Blake, C. ² Department of Physiotherapy, Mid-Western Regional Hospital, Limerick ¹ UCD School of Physiotherapy and Performance Science, University College Dublin ²

INTRODUCTION

Hepatitis C is a common viral infection transmitted through exposure to infected blood or body fluids. The National Hepatitis C database indicates that 1,600 Irish individuals have been infected as a result of transfusion since the 1970's. Chronic Hepatitis C infection is accompanied by a range of hepatic and extra-hepatic complications which impact on health, well-being and participation in society.

Extra-hepatic symptoms range from myalgia, arthralgia, muscle wasting and fatigue, pruritis and parasthesia to cognitive dysfunction and depression.^{1,2,3,4} All of these contribute to the complex clinical picture and impact on physical and psychosocial health and quality of life (QoL).⁵ Studies to date have illustrated the negative impact of Hepatitis C on Health-related quality of life (HRQoL).^{6,7,8} Limited research has been conducted in this area from an Irish perspective.⁹

OBJECTIVE

This study, evaluated the consequences of chronic blood-product related Hepatitis C infection on self-reported QoL. The study aim was to compare QoL in Hepatitis C to general Irish population norms¹⁰ and determine factors associated with QoL in the Hepatitis C group. The SF-36 Health Survey, a generic QoL measure was used to quantify respondents' perception of their functioning in eight dimensions of daily life.

METHODOLOGY

All registered persons with blood product-related chronic Hepatitis C infection were eligible for inclusion and they were contacted through the appropriate patient advocacy group. Participants were asked to complete an anonymous postal survey using a self-completed questionnaire designed to capture relevant socio-demographic, economic and clinical data in addition to the SF-36.

Analysis

Data were analysed using SPSS version 11.0. Differences between groups were assessed using non-parametric Mann-Whitney tests and correlations with age were examined using Spearman's rho.

RESULTS

A 27% response rate was achieved and data for 291 respondents (16% male, 84% female) was analysed. Mean age of participants was 55.6 ± 10.1 years and the mean time since diagnosis was 11.4 ± 3.6 years. Concurrent renal disease was reported in 5.9 % and 6.6% had haemophilia. Compared to normative age-referenced data, chronic Hepatitis C patients have reduced QoL with significant differences on 7 of the 8 scales of the SF-36 ($p < .0001$) (Figure 1). Females scored worse than males in physical function (PF), bodily pain (BP), social function (SF) and mental health (MH) scales ($p < .05$). Concurrent renal disease was associated with poorer PF and general health (GH) scores, and haemophilia was associated with poorer vitality (VT) scores ($p < .05$). Age had a significant negative relationship with PF and BP ($p < .05$) showing that these scores were poorer with increasing age.

Figure 1 - Median SF6 Scores: Hep C (n=291) v General Population (n=295)

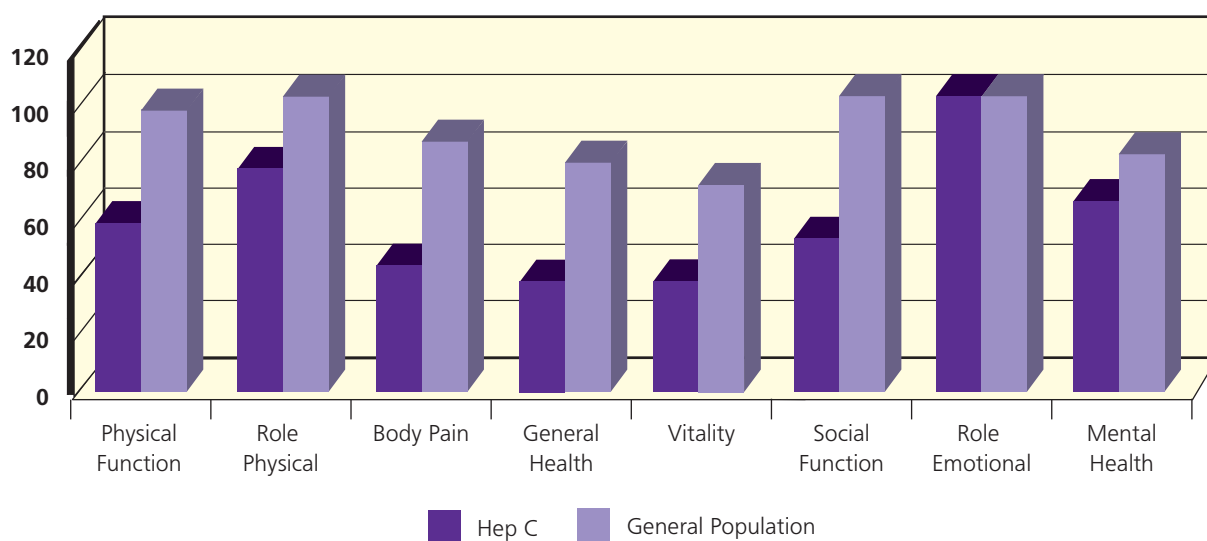


Table 1 - Relationship between Age, Gender and Co-morbid Illness and Physical Function

		Median PF Score	Univariate Analysis
Gender	Male	70	p<.01*
	Female	50	
Co-Morbid Disease	Renal Disease	32.5	p<.001*
	No Renal Disease	60	
Age - In Years		rho -0.177	p<.01**

*Mann Whitney Test, **Spearman's Rank Correlation

CONCLUSION

Chronic Hepatitis C infection is associated with poor HRQoL by comparison with the general Irish population. This is most marked in the physical subscales. Females, advancing age and those with co-morbid illness are most affected. Recognition of these factors is essential for all health care providers when determining rehabilitation needs.



PRESENTED

As a Poster Presentation at the 2nd International Hepatitis C Conference “Moving Forward with Hepatitis C – A Two-Stranded Programme” in Dublin Castle, June 21st to 23rd, 2006.

FUNDING

This project was partially funded by the HSE Primary Care Unit (Mid-West Region).

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Population Health

Public Health

TITLE	Working Towards Changing Policy in the Prevention and Treatment of Head Lice – the Bug-Busting Method
AUTHORS	McGuirk, D., Quirke, G., Doyle, E., Ormsby, J., Horgan, B., Lavin, N., O’ Hanlon, A., Douglas, B., McMahon, N. Public Health Nursing Service, North Dublin, HSE Dublin North East

INTRODUCTION

In recent years many families and schools in the North Dublin area expressed the need for support in addressing the problem of head lice which remains a significant issue for families, schools and communities. The literature defines this ectoparasite (*pediculus capitis*) as predominately affecting children between 3-12 years of age. It is considered the most frequent communicable disease next to the common cold. Public Health Nurses identified the Bug-busting method as an alternative and suitable method in the prevention and treatment of head lice. This method comprises of a set of specifically designed combs which when used on the hair on recommended days interferes with the life cycle of the louse. Combing is facilitated by using conditioner. Some health promotion/ education was provided to inform families and children how to use this product appropriately. The bug-busting method differs from the present policy which recommends the use of lotions only. In order to use the bug-busting product families are required to pay for it. The opportunity to receive local funding to support some research was also timely. A number of public health nurses were working with schools and the community at the time and they agreed to become involved in the study.

OBJECTIVES

The aim of the pilot study was to assess the perceptions of two community groups regarding their views on the use and treatment of the bug-busting method in the prevention and treatment of head lice. It also aimed to identify usage of the bug-busting and other methods used by families and to confirm which method of prevention/treatment of head lice families preferred to use.

Goals included the need to consider changing central policy on how head lice is prevented and treated in the community setting. This should provide choice and facilitate the provision of a non-toxic treatment for head lice in our community.

A second priority is to roll out a school programme in the North Dublin area and ultimately a national programme.

METHODOLOGY

A questionnaire was designed by Public Health Nurses and administered to 200 families to facilitate this pilot study. A stratified sample method was utilised as only two local geographical areas had use of the bug-busting method. Half of the sample had used the bug-busting method for up to three years and the other for only six months. A response rate of 58% was achieved.



RESULTS

The results clearly show the value families place on the bug-busting method in the prevention and treatment of head lice. 103 (89%) families in the sample returned found the bug-busting method worked with 72% identifying the need to treat their children's infestation. One of the most interesting findings was that 110 of the sample (95%) had used the bug-busting method with 68 (59 %) continuing to use bug-busters as their method of choice. 103 (89%) of the sample stated they would be prepared to use the bug-busting method again. A significant p value confirmed this finding.

CONCLUSIONS

Recommendations from this small pilot study include the need to further confirm the study results utilising robust research methods. The questionnaire designed by the researchers was not tested prior to use for its validity and reliability but had been utilised in another community care area.

An application for funding and research expertise is required to develop this action research in the interest of providing a valuable resource for parents in preventing and treating head lice. Our plan includes the use of action research in conjunction with the development of the schools programme.

A population health approach has been adopted with the formation of a cross pillar group. Representatives include PHNs, nurse management, schools and the national parents association. In addition strategic support from our child and adolescent health officer and the local childrens' hospital should further develop this project.

PRESENTED

To Public Health Nursing students in University College Dublin in May 2006 by Ms. Elizabeth Doyle.

FUNDING

This project has received funding from HSE, Dublin North East.

Population Health

Public Health

TITLE	Public Health Nurse-led Child Health Screening Programme
AUTHORS	<i>Horgan, B., Murphy, T., O' Connor, C., Murphy, J., Lavin, N., McMahon, N., McDermott, M., Hartford, M., Doyle, E., Curtis, M., Pollard, G. Public Health Nursing Service, North Dublin, HSE Dublin North East</i>

INTRODUCTION

Public health nurses (PHNs) work as generalists with a wide range of responsibilities for all age groups, encompassing primary, secondary and tertiary care. PHNs are the primary contact for families who require HSE services (Kelly 1995). The PHN works within a multidisciplinary, multi-agency team in ongoing monitoring of children and their families. The primary aim is to ensure optimal outcomes for all children. Children are routinely screened by PHNs at birth and at 3 months, and again at 7, 12, 18 months, 2 and 3 years of age. Up to recently all children were offered a developmental screening examination at 9-12 months carried out by an Area Medical Officer (AMO) and PHN.

In 2004, due to the lack of Area Medical Officers (AMOs) children's developmental screening appointments were delayed in North Dublin up to approximately 18 months. "Best Health for Children" recommends the need to screen at 7-9 months in order to achieve the best outcomes for each child's development.

In order to respond to best practice recommendations and the present resource limitations a decision to provide a nurse-led child health screening service at 7-9 months was initiated. The availability of a number of special AMO referral clinics throughout the area where PHNs could refer completed the screening process. This enabled all children to avail of an early screening check with the additional expertise available through our medical special clinics. Children who did not pass the screening test were referred to these special clinics.

OBJECTIVES

The overall aim was the delivery of an equitable quality child health screening service to all children in North Dublin.

The main objectives include:-

- Early screening to detect defects and refer to the appropriate services within the most appropriate time frame ensuring a public health agenda.
- Provision of an equitable service throughout Dublin North.
- To ensure that all infants are offered a child health screening examination between 7-9 months which incorporates the following elements:
 - Growth and developmental review
 - Screening of vision and hearing
 - Maternal wellbeing
 - Health promotion

METHODOLOGY

An analysis of the appointment system was undertaken. A decision was taken that all children born after January 1st, 2004 would now receive an appointment with the new system to attend the 7-9 month review.



Appointments were to be sent out centrally to parents to invite them to the nurse-led child health screening clinic 2-3 weeks in advance of the appointment date. Clients were asked to phone if unable to attend.

Members of the steering group took responsibility for communicating the developments and process to each of the health centres. The new system was discussed through consultation and feedback sessions.

Under the new system new invitations were drawn up inviting clients to a nurse-led child health screening clinic. New letters of referral to other services and new appointment cards were drafted and printed. New referral systems comprised of PHNs using direct referral to community ophthalmologists. The PHNs continued to refer directly to the AMOs special clinic, GPs and back to a recheck clinic as required. AMO clinics were arranged according to the needs of the health centre and the population group it served.

Regular consultation and review meetings were held. In the role roll out of the new system it was identified there was a difficulty with some PHNs working alone in one man health centres. This difficulty arises with the need to have two people (one distracter, one to test) to carry out the hearing screening check. A number of Registered General Nurses (RGNs) and Health Care Attendants (HCAs) received training in hearing distraction testing to facilitate this part of the screening service.

One year on a review of the screening clinics is progress to evaluate the effectiveness of the new nurse-led child health screening service. The objectives include:

- To review the % of children offered appointments.
- To ask PHNs their views of the nurse-led service.
- To identify if objectives are being achieved.
- To identify gaps in service provision.
- To identify educational requirements in order to advance the quality of the new service.
- To check with our customers (families) if this service meets their needs.

RESULTS

Results from our central administration confirm that presently all children between the ages of 7-9 months are offered an appointment at the appropriate time and there is no waiting list.

To date PHNs have completed a questionnaire which discusses their satisfaction or otherwise with the new screening programme. The questionnaire was designed by a number of the PHNs. The questionnaire covers the views of the staff in relation to the new process, its objectives and gaps in education for staff.



Questionnaires were distributed to 45 PHNs. There are 55 PHNs in full-time and part-time posts but many were on leave at the time of distribution. 30 returned the questionnaires. This represents a response rate of 65%. Frequency tables were constructed for all questions.

The key findings include:

- 60% were happy with the clinic-based service and 73% refer to the provision of a quality based service.
- Only 37% of the sample was satisfied with the ability to carry out the hearing screening appropriately. The majority cited environmental issues as the main difficulty.
- A number of areas were identified as requiring discussion. These this included examination of the hip, heart and testes. These areas were previously carried out by the Area Medical Officer. Other requirements included updating in sleep patterns, skin care, scoliosis, dental and child safety.

Staff were asked if they considered the screening methods reliable. 30 (70%) respondents recorded positively but many recorded some dissatisfaction. 40% were unhappy with the ability to perform a suitable hearing test at clinic level. There is a significant amount of work ongoing in this area at present with the programme for action for children.

CONCLUSION

Results identify the need to do further statistical analysis and review prior to a customer satisfaction survey.

Population Health

Health Promotion

TITLE	Physical Activity among National School Children in the Mid-West
AUTHORS	<i>Houghton, F., Cowley, H., Meehan, F., Kelleher, K. Department of Public Health, HSE West</i>

INTRODUCTION

There are growing concerns over the increasingly sedentary lifestyle of people in Ireland. A particular focus of this concern is around children. The recent Report of the National Taskforce on Obesity stated that *'it is generally accepted that children should be involved in at least 60 minutes of moderate physical activity each day'*.¹ It should be noted that it is probable that this figure relates more to health, rather than to weight maintenance or weight loss.

RATIONALE

To explore the current level of physical activity among National School children in the Mid-West Region of Ireland.

METHODOLOGY

This research involved 1,253 5th and 6th Class children and was conducted in 43 National Schools in the region. This survey achieved a response rate (including non-participating schools) of 76.2%, active parental consent being a precondition of participation. Children in this analysis ranged in age from 10-13 years and had an average age of 11.5 years (sd=0.73). Ethical approval for this study was obtained from the Ethics Research Committee of the Mid-Western Regional Hospital, Dooradoyle, Limerick. This element of the survey used questions from the Health Behaviour in School Aged Children (HSBC) survey.¹

RESULTS

Only 41% of boys and 33.4% of girls aged 10-13 years achieved the 60 minutes of moderate physical activity per day target in the week preceding the survey (see Table 1). The gender split in this finding is equally worrying. Even at this relatively young age, chi-square analysis revealed that girls were significantly less likely to attain the target level of one hour of physical activity per day than boys ($\chi^2 = 7.341$, df=1, p<.01). It should be noted that the question asked in this survey related to a total of one hour of physical exercise per day, over the previous week. This exercise did not have to be done in one session, but was the total combined amount of exercise per day.

The Report of the National Taskforce rates as convincing the evidence that sedentary lifestyles promote weight gain and obesity.² In this context therefore it is worthwhile exploring the amount of time spent watching television by this sample of National School children. It is equally alarming therefore to note that on weekdays 38.7% of boys and 31.2% of girls watched approximately three hours or more television per day. At the weekends 49.4% of boys and 41.6% of girls watched approximately three hours or more television per day.

Table 1 - Number of days over the past week pupils were physically active for at least one hour by gender

No. of Days	Boys (n=547) % (n)	Girls (n=656) % (n)
0	1.3 (7)	1.1 (7)
1	2.9 (16)	3.5 (23)
2	3.7 (20)	6.1 (40)
3	7.5 (41)	9.9 (65)
4	12.4 (68)	12.0 (79)
5	14.3 (78)	18.6 (122)
6	17.0 (93)	15.4 (101)
7	41.0 (224)	33.4 (219)

DISCUSSION

Three years on, this survey largely re-confirms earlier disturbing findings from the HSBC conducted in 2002.¹ Less than half of National School children are physically active for at least one hour per day. In the absence of any visible improvement during this intervening period, it is imperative that urgent action be taken to address the issue of increasingly sedentary lifestyles and obesity, particularly among our youth population. The eighty or more recommendations contained in the recent Report of the National Taskforce on Obesity² need to be acted upon now to combat the looming obesity epidemic.

REFERENCES

1. National Taskforce on Obesity. Obesity the policy challenges: The report of the national taskforce on obesity. Dublin: Department of Health and Children; 2005.
2. Centre for Health Promotion Studies. The national health and lifestyle surveys. Galway: National University of Ireland; 2003.



Health Systems Management

Clinical Services (Physiotherapy)

TITLE	A Focus Group Study of Student Physiotherapist's Perceptions of Reflection
AUTHORS	<i>Roche, A., Coote, S. Department of Physiotherapy, University of Limerick</i>

INTRODUCTION

Reflective practice is a learning strategy that involves thinking critically about one's actions and is a recognised cornerstone of continuing professional development or CPD.¹ With the present climate of accountability, physiotherapists have also embraced the call for evidence-based practice (EBP) and clinical effectiveness to underpin their practice. An essential component of continually developing as a professional and being clinically effective is critical self-appraisal through reflection. The reflective practice module within the undergraduate physiotherapy programme at University of Limerick (UL) is a first within physiotherapy curricula in Ireland.

OBJECTIVE

Research however, examining reflective practice as a means of learning and as a tool to enhance professional practice is limited. With mandatory documentation of a chartered physiotherapist's CPD activities being an imminent proposal in this country, the evaluation of a novel strategy endeavouring to enable physiotherapy students to reflect effectively is of interest to the profession. Therefore research is required to determine students' perceptions of this novel reflective practice module in their training.

METHODOLOGY

20 Year 3 and Year 4 Physiotherapy students at U.L. were randomly selected. Year 1 and 2 students were excluded as the module occurs during Year 3. Students volunteered, gave informed consent and the UL Research Ethics Committee granted ethical approval.

A qualitative research design of focus groups was employed. Three focus groups were held in total with the Year 3 students before and again after their reflective practice module, to examine any change in their perceptions of reflection. A third was held with the Year 4 students, to determine their perceptions a year after completing the module and with subsequent clinical placements. The researcher led the sessions which all followed a similar questioning structure, outlined by Krueger.² An independent observer noted group dynamics during each session.

Sessions were audio taped, transcribed verbatim and subject to thematic analysis. This involved examining transcripts to identify concepts (such as significant sentences), which were arranged into four major themes by comparing concepts across each group. The observer's notes were used to support the analysis and participants read a descriptive statement of their session(s) to confirm accurate interpretation.

RESULTS

Students demonstrated a more advanced level of reflective ability post-module completion, in considering its impact on their future actions. They reported personal and professional benefits to practising reflection, which they felt resulted in a more evidence-based approach to practice. They recognised these skills as strategies to continue in facilitating their CPD. A barrier to reflecting which the students experienced was the negative attitude towards the concept amongst some qualified physiotherapists.



CONCLUSIONS

These students fully support the inclusion of the module in their training and acknowledge its role in improving their confidence, clinical reasoning and facilitating their CPD once qualified. Negativity regarding reflective practice amongst clinicians may discourage reflection in practice.

Further studies are required to generalise these findings to a wider population and explore why negative attitudes towards reflection prevails in the clinical setting.

REFERENCES

1. Clouder L. Reflective practice in physiotherapy education: a critical conversation. *Studies in Higher Education*. 2000;25(2):211-221.
2. Krueger RA. *Developing questions for focus groups*. London: Sage Publications; 1998.

PRESENTED

As a Poster Presentation at the ISCP (Irish Society of Chartered Physiotherapists) Annual Conference on November 10th and 11th, 2006 at the Croke Park Conference Centre in Dublin.

HEALTH RESEARCH BOARD RESEARCH FELLOWSHIP FOR THE THERAPY PROFESSIONS

Ms. Amanda Connell, Lecturer/Year 1 Tutor in the Department of Physiotherapy at University of Limerick (UL) has been successful in securing a Health Research Board Research Fellowship for the Therapy Professions. This is the first time this award scheme has been made available and is a joint initiative between the HRB and the DoHC. 21 proposals were accepted for international review and a shortlist of 9 were interviewed.

The award includes salary and on-site costs for a three year period and an additional sum for international collaboration totalling something in the region of €170,000.

Amanda's project is "The effect of motor skill training on the developmental profile of children aged 6 to 8 years in rural Ireland." She will be conducting the research in National Schools in West Cork under the guidance of Dr PJ Smyth in Sports Science at UL. Amanda has been invited by Prof Jan Piek, whose work in this field is internationally renowned, to visit and work with her Developmental Psychology Research group at Curtin University in Perth, Australia in January 2007.

NEW APPOINTMENT

Prof Dominic Harmon has recently joined the Min-Western Regional Hospital Limerick as a consultant anaesthetist and has been appointed adjunct Professor of Pain Sciences at the University of Limerick.

His primary research interests include interdisciplinary management and biopsychosocial models of chronic pain, applications and education of ultrasound in the perioperative period, simulation in medical education, technology assessment as pertains to the perioperative period and chronic pain, and neuropathic pain. Dominic is currently developing collaborative research partnerships with cohorts at the University of Limerick to tackle chronic pain management.

AWARDING OF 100TH ANNIVERSARY CELEBRATION MEDAL OF POLISH MEDICAL SOCIETY



Left to Right: Dr John Kellett and Dr James O'Hare on the occasion of awarding the Centenary Medals of the Polish Society of Internal Medicine in Katowice, Poland.

Dr John Kellett, Consultant Physician Nenagh, and Assistant Editor European Journal of Internal Medicine, and Dr James O'Hare, Consultant Physician, Mid-Western Regional Hospital Limerick (current President Irish Association of Internal Medicine), were awarded the 100th Anniversary Celebration Medal of the Polish Medical Society in Katowice, Poland along with other presidents from national associations from around the world during the European Study Day of the European Federation of Internal Medicine on September 8th, 2006.



AWARDING OF FELLOWSHIP OF THE ROYAL COLLEGE OF GENERAL PRACTITIONERS (RCGP)



Dr Ray O'Connor at the Royal College of General Practitioners (RCGP) in London on November 17th, 2006 where he was awarded a Fellowship of the RCGP.

A Limerick City doctor was awarded a Fellowship of the Royal College of General Practitioners (RCGP) at its Annual General Meeting in London on Friday 17 November, 2006.

Fellowship – the highest level of RCGP membership - is awarded to family doctors deemed by the College to demonstrate its standards, values and commitment to high quality general practice.

Dr Roger Neighbour, President of the RCGP, said: "Fellowship is awarded only after a thorough enquiry into the doctor's professional achievements. I hope

the patients of all our new Fellows elected this November will share my sense of pride in what they have accomplished."

Dr Ray O'Connor (47) has been a full-time GP in Kileely for the past 16 years. His practice covers the north side of Limerick City including Moyross, Ballynanty Beg, Thomondgate, Caherdavin and the Ennis Road.

Dr. O'Connor has been an Assistant Programme Director of the Mid-Western GP training scheme since February 2000, where he is involved in teaching medical topics, audit, research and IT in general practice. This GP training programme helps to prepare young doctors for entry into general practice.

Dr O'Connor is also an undergraduate GP tutor for University College Dublin, University College Cork and Trinity Colleges.

A regular contributor to the National Institute of Health Sciences Research Bulletin, his other professional interests include the management of chronic illness and the treatment of diabetes. He is currently chairman of the Mid-West Primary Care Diabetes Group which offers services to the diabetic population of Limerick, Clare and North Tipperary.

NATIONAL BREASTFEEDING WEEK 1ST TO 7TH OCTOBER 2006



Launch of the Breastfeeding Support Group at the Millennium Hall in Raheen who will meet each Monday morning at 11am.

The theme of this year's campaign '*Families Supporting Breastfeeding*', aims to address the barriers to breastfeeding that can exist within families. Research shows that the attitude and support of partners and grandparents (particularly the new mother's own mother) is a significant factor in a mother's decision to breastfeed and in the success of breastfeeding. The importance of providing information to partners and grandparents which forms part of this year's campaign is a recommendation in 'Breastfeeding in Ireland: A Five Year Strategic Action Plan' (DOH&C, October 2005).

With the lowest breastfeeding rates in Europe, Ireland still has a bottle feeding culture and the need to create advocates for breastfeeding within families, as well as at wider societal level, is crucially important if we are to foster and build support for breastfeeding in order to make it achievable for the vast majority of families in Ireland.

HSE Public Health Nurses in the Mid-West played their part in supporting this year's campaign by inviting mothers and their families to a number of coffee mornings throughout the region. A promotional stand was held at Dooradoyle Shopping Centre; the largest in the area and also at DELL which is one of the major employers locally, having a workforce of 5,000 approx. The week saw the opening of a Breastfeeding Room at the new Health Centre in Nenagh which is located on the grounds of Nenagh General Hospital. An information display was also available at the annual Healthy Living Expo at the General Hospital in Ennis. Finally, the Regional Maternity Hospital held an 'open afternoon' where hospital staff, mothers who had previously or were currently breastfeeding along with their families were invited to celebrate the week.

Nationally, the highlight of the week was the 2nd All Ireland Breastfeeding Conference; 'Breastfeeding in a Bottle Feeding Culture' on Friday October 6th which was opened by Mary Harney, TD Minister for Health and Children. The keynote Speaker Dr. Jack Newman gave a thought provoking and enlightening presentation on 'The Bottle Feeding Mentality and Breastfeeding Myths'. Dr. Newman is a Paediatrician in Toronto and runs a Breastfeeding Clinic. In his address Dr. Newman:

- outlined how the 'bottle feeding mentality' develops
- he identified the various factors that result in health professionals not being prepared by their training to overcome the 'bottle feeding mentality'
- how to recognise that the myths about breastfeeding arise from the bottle feeding mentality and that these myths interfere with our understanding of breastfeeding.

HEALTHY LIVING EXPO

More than 1,000 people participate in the Annual Health Living Expo in Clare in October.... an innovative initiative to increase health awareness amongst local communities...

The Mid-Western Regional Hospital, Ennis in partnership with the Local PCCC services hosted the annual **Healthy Living Expo** in Ennis on Saturday 7th of October 2006. The Expo is hugely popular within the Clare



area with more than 1,000 people attending each year to have their health assessed and to meet with local health professionals.

This year the Healthy Living Expo supported the Irish Heart Week and adopted the theme of **'Love your Heart- know your blood pressure and cholesterol'**.... aiming to raise heart health awareness amongst local communities. Hospital staff invited local people to attend for **free** screening of blood cholesterol and glucose levels, blood pressure and body mass index.

Health professionals provided health information on a vast array of issues ranging from smoking cessation, healthy eating, weight management, hand hygiene, mental health. The healthy eating demonstrations and smoothies were a huge success on the day. More than 50 community and voluntary service providers also attended the Expo providing health-related information; these included the Irish Heart Foundation, the Irish Cancer Society the Diabetic Federation Ireland, mental health services; citizen information services and the Ombudsman to name but a few.



Resuscitation Training Officer demonstrating Basic Life Support at the Expo



Children admiring the entries in the Healthy Lunch Box Poster Competition

Local schools were invited to participate in a poster competition to design a healthy lunch box. The winning entries will be incorporated into a poster for primary schools on healthy lunch boxes.

On Saturday October 7th, almost 800 people participated in the heart health screening programme and had their blood pressure, body mass index (BMI), blood serum cholesterol, and glucose levels measured. Participants also completed a questionnaire to assess their self-reported health status. The findings are currently being analysed and will be reported later in the year.



Staff Member taking blood pressure at the Expo



Lung Function Testing at the Expo



The organising committee report that the findings from last year's Healthy Living Expo are quite concerning. While the majority of people reported that their health was good or very good, one in two people had not visited their GP for a health check in the previous three years. This is particularly worrying in light of findings that 3 out of 4 people had raised cholesterol levels and a significant number of people had high blood pressure and blood glucose readings on the day.

Almost a half of those attending (43%) were overweight and another 23% were obese- this is higher than the national averages; in Ireland at present 39% of the population are overweight and another 18% are obese. More than half of the participants reported being concerned about their stress levels, identifying home-life and work as the main sources of their stress.

The organising committee report that the success of the Expo is very much due to generosity of local HSE staff who volunteered to work on the day.

MENTAL HEALTH WEEK



Left to Right: Margaret O'Brien, Serena Kennedy (10) and Amy Guirey (16) at the Beat the Blues Away Street Event on Saturday October 7th outside Penney's, O'Connell Street, Limerick



Dr. Tony Bates and Dr. Linda Lehrhaupt with students from the Presentation Secondary School, Limerick who participated in Surfing the Wave - A day of mindfulness for Teenagers in the Castletroy Park Hotel, Limerick

Mental Health Week took place in Limerick, Clare and North Tipperary from October 7th to October 14th 2006. The week was organised by Limerick Mental Health Association in partnership with mental health associations throughout the Mid-West, 2nd and 3rd level educational institutions, community groups and the statutory health services. It consisted of workshops, seminars and other events aimed at the general public and specific groups such as students which aim to promote the practice of mindfulness.

Mindfulness is a simple method, which teaches us to pay attention to our experience of life in the present moment. Whether we're sitting in a car, struggling to meet some deadline, or facing some difficult challenge in our lives, mindfulness teaches us a way of being present to wherever we are and to deal with it.



The practice of Mindfulness is increasingly being acknowledged as a means of reducing stress in people's lives and research has shown that it is particularly beneficial to those who experience depression. Mindfulness teaches people a different way to react to stress, how to steady themselves, how to allow and accept what is happening, rather than try and put it away. By focusing on their breathing, for example, they learn to gradually calm and anchor themselves in the present moment and not get carried away by frightening thoughts of what might happen in the future or in depressing self-blame for what may have occurred in the past.

The core programme for mental health week was facilitated by Dr. Tony Bates, Director of the National Centre for Youth Mental Health and Dr. Linda Lehrhaupt from the Institute for Mindfulness and Stress Reduction in Bedbug, Germany.

The emphasis during the week was on experiential learning with full day workshops on learning the skills of mindfulness. These included *Surfing the Wave* (schools), *Be free wherever you are* (general public) and a day for professionals. Workshops were also held on laughter, improvisation, and singing. Seminars included *Mindfulness: It's not what you think*, *The Heart of Laughter*, and *Learning to think on your feet*.

Mental Health Week 2006 offered people the opportunity to discover and develop skills to meet or cope with the demands of everyday life in a relaxed, supported and often fun environment. The feedback from participants has been overwhelmingly positive with requests from the general public to organise mindfulness sessions locally on an ongoing basis and from schools to provide training to staff. An evaluation of the week which is being carried out by clinical psychology students from the University of Limerick will provide further insights as to the value of the skills learned by the participants. It will also inform the organisers as to how to improve the quality of the week and to provide a better service to participants.

Limerick Mental Health Association started this project with the aim of providing a mental health festival which could reach into all sections of society.

This year it has expanded to include the Mid-West region. One of the very affirming aspects of the week were the number of phone calls and e-mails received from people in Dublin, Kilkenny, Cork and other areas of the country seeking information on what was happening in their area for *National Mental Health Week*. We hope that the week will expand and that it will take on a national identity and that in the process that people will develop not only better coping skills but a more open attitude and understanding of their own mental health.

Mental health week will take place from October 6th to 13th, 2007 and while it will incorporate elements of the two previous years it will have a different focus. The organisers welcome ideas and these may be sent to info@lkmentalhealth.ie

RESUS 2006

... An Innovative National Conference on Resuscitation Practice..... Aiming to Improve Health Outcomes for Patients Requiring Immediate Life Support

RESUS 2006 was held in Ennis on November 3rd and 4th, 2006 with more than 300 delegates from the medical, nursing, emergency and voluntary services (including fire, army and civil defence services) participating in the conference and skills-showcase event.

RESUS 2006 builds on the priorities identified in the health strategies; including the Quality & Fairness and Cardiovascular Health Strategies and the recently published **Task Force Report on Sudden Cardiac Death** (March 2006).



The overall aim of the **RESUS 2006** conference event is to promote and support the development of resuscitation standards across all levels of emergency and cardiac care in Ireland, and most specifically the ongoing implementation of the new Resuscitation Standards published by International Liaison Committee on Resuscitation (ILCOR)

Uniquely, **RESUS 2006** brought together specialists from all aspects of resuscitation and combined models of practice across medical, nursing, emergency, community and voluntary services. The event aimed to promote and support the ongoing implementation of the International Liaison Committee on Resuscitation (ILCOR) Resuscitation Standards 2005 across all levels of emergency and cardiac care in Ireland.

The two-day event comprised of an educational conference, a national skills showcase/competition, outside demonstrations of best practice by the emergency services and a trade exhibition.

RESUS 2006 - Educational Conference



Left to Right: Dr John O' Dea Consultant Anesthetist, Mid-Western Regional Hospital Ennis, Dr Ann Hogan, Local Health Office Manager, Clare, Mr. Frank Mc Clintock, Assistant National Director of HSE Ambulance Services, Sir Rodger Thayne, OBE, Consultant to NHS Ambulance Services, Dr Rick Verbeek, Associate Professor, University of Toronto, Canada.

Over the two days, eminent guest speakers presented the latest evidence of best practice in Resuscitation, including sudden adult death, defibrillation, thrombolysis and trauma resuscitation. The speakers included:

- Dr. Emer Shelley, National Heart Health Advisor and co-author of the Sudden Adult Death Task Force Report
- Dr. Jasmeet Soar – Consultant Anaesthetist and co-author of the European Resuscitation Council Advanced Life Support Guidelines,
- Dr. Rick Verbeek – Consultant in Emergency Medicine and co-author of the American Heart Association Advanced Life Support Guidelines
- Rodger Thayne, OBE CEO of Staffordshire Ambulance Services, NHS Trust

RESUS 2006 - Outside Demonstrations of Emergency Service Providers in Action

Delegates attending the conference had a unique opportunity to observe personnel from the emergency response services demonstrate best practice in a variety of emergency care scenarios; Demonstrations included;

- Clare Fire and Rescue Service and HSE MW Ambulance Services demonstrated best practice in 'Managing Road Traffic Casualties' and 'safe patient removal techniques'
- Heights Rescue Demonstration- HSE West Ambulance and Clare Fire and Rescue Services
- Special Incident Mobile Field Hospital Display – the HSE West Ambulance Service demonstrated practice in managing in 'Decontamination incidents' including Nuclear, Chemical and Biological contingency plans
- Air Corps personnel hosted viewing of the EC135 Air Ambulance Helicopter and an off-site viewing of the Lear-Jet with full medical configuration at Shannon Airport

RESUS 2006 - A National Skills Showcase & Competition - demonstrating excellence

Emergency service personnel, voluntary organizations and medical teams from acute hospitals across the country demonstrated resuscitation practice and skills in pre-hospital, community and hospital settings. This took



a competitive format with teams challenging each other to excel and demonstrate the best possible provision of emergency life support and resuscitation skills in Ireland.

The 'Best Patient Care Award' winners at RESUS 2006 were:

Community First Responder Award went to 'Wicklow First Responders;



Left to Right: Suzanne Gorman and Catriona Roche receiving their prize from Mr. Paul Downes, Emergency Care Services.

Basic Life Support Award was won by the Red Cross Team;



Left to Right: Mr. Mark Fleming, Fleming Medical, Hilary Parkinson, Kenneth Butler, Red Cross

Emergency Medical Technician Award winning prize went to HSE Mid-Leinster Ambulance Services; Tullamore Station;



EMT Winners Left to Right: Tom Clavin, Paul Downes, Emergency Care Services, Sandra Rock and Cora Brady EMT Team from Tullamore Ambulance Station

Advanced Cardiac Life Support Hospital Category was won by a multidisciplinary team from the HSE West;



Left to Right: Niall O'Dowd, EMT, Ambulance Service Limerick, David Hennelly, Advanced Paramedic, Ambulance Service, Limerick, Mark Fleming, Fleming Medical, Dr Catriona Mullarkey SPR in Emergency Med, Dr David Millman, SHO in Emergency Med, Denis Casey, Clinical Nurse Manager in ICU, and John McAuley, EMT, Ennis Ambulance Service.

RESUS 2006 was hosted by the Health Service Executive, Western Area with financial support from the Pre-Hospital Emergency Care Council (PHECC), and Ambu UK Ltd. The event was endorsed by the Irish Society for Immediate Care (ISIC) and approved by An Bord Altranais.

For more information on the RESUS 2006 event please log on www.mhb.ie and follow links to RESUS 2006.



BETTER INTELLIGENCE, BETTER DECISIONS, BETTER HEALTH

7-8 November 2006, The Royal Hospital Kilmainham, Dublin

This was the first all-Ireland conference to focus on the practical issues associated with the development of health intelligence and its translation into effective policies, plans and practice.

Delegates were given the opportunity to:

- Engage in debate about what is meant by “health intelligence”
- Receive updates about how health information and the health intelligence function is being developed across the island
- “Road test” and receive practical training in many of the recently developed web-based tools
- Met like-minded people and discuss how to build better information and better intelligence for health

Significant changes in public administration, and the health and social services, are occurring in the North and South. This conference presented an opportunity to help shape the role that health information and the health intelligence function will play in these changes. The proceedings of the conference will be published and disseminated widely.

Further information about the conference is available at:
www.healthintelligence.ie/hi_conference2006.htm

RETAINING NÁDÚR – CREATING MEITHEAL INTERNATIONAL PALLIATIVE CARE CONFERENCE

Milford Care Centre/HSE West, April 19th and 20th, 2007.

The aim of this conference is to inspire those working within Palliative Care by reflecting on two Irish words, Nádúr and Meitheal.

Nádúr literally translates as nature; however it also means the nature or essence of the person. Meitheal is the Irish word for a group of neighbours who come together to help with a task. Meitheal is what we aspire to achieve in our multidisciplinary team in palliative care.

Invited speakers are the academic or Learned Meitheal. We as participants and workers come together as the Professional Meitheal. We will speak about the people for whom we care who form the Community Meitheal. While reflecting the concept of community, reflecting on our nádúr supports us. The conference themes will therefore explore the nature and caring: the nature of the carer; the nature of the caring community and the nature of the caring society.



Education, Training and Continuing Professional Development

SKILLS TRAINING ON RISK MANAGEMENT - STORM

STORM is an evidence based Suicide Prevention initiative for ALL healthcare staff. It is particularly useful for anyone working with those vulnerable to feeling suicidal.

It is skills-based to enhance and develop the skills needed to assess and manage a person at risk of suicide

STORM incorporates proven teaching techniques to help trainees gain and maintain **skills** needed to **assess** a person at risk of suicide and **manage the crisis** effectively.

STORM is delivered by trained STORM facilitators in the HSE, West in a safe and supportive environment for effective skills learning. Small-group training encourages skills development. Rehearsal, self-reflection and feedback help develop new skills and foster good practice.

The programme comprises of 4 modules. Each module focuses on the micro-skills needed to achieve its objective.

- Assessment – focuses on asking questions indicating suicidal risk
- Crisis Management – develops a strategy to keep a person at suicidal risk safe
- Crisis Prevention – builds on the strategy formed in crisis management to use in the event of future crisis
- Problem solving – teaches a simple self-help technique

To date, most frontline Mental Health Staff such as nurses, social workers, psychologists, psychiatrists, occupational therapists and counsellors have attended STORM training throughout the HSE, West. General Practitioners in North Tipperary have also attended for training. The Suicide Prevention Office is currently organising the delivery of STORM for Limerick and Clare General Practitioners. It is also envisaged that training will soon be offered to all Practice Nurses in the area.

If you have not attended for STORM training and are interested in improving your skills in the assessment and management of suicidal clients please contact the Suicide Prevention Office, HSE, West for further details on 061-461454

(ASIST) APPLIED SUICIDE INTERVENTION SKILLS TRAINING

(ASIST) Applied Suicide Intervention Skills Training is a 2-day skills based workshop that helps prepare individuals of all backgrounds to provide emergency first aid, life-assisting interventions to persons at risk of suicide.

The aim of this programme is to:

- increase the ability to promote the immediate safety of someone who may be at risk of suicide and provide links to further help.
- recognise invitations for help
- reach out and offer support
- review the risk of suicide
- apply a suicide intervention model
- link people with community resources



Training is currently been offered to multidisciplinary and multi agency personnel throughout Limerick, Clare and North Tipperary.

For further information please contact the Suicide Prevention Office on 061-461454.

MIDWIFERY EDUCATION CHANGES IN THE HSE WEST (LCNT)

Following the Expert Group Report on Midwifery education by the Department of Health and Children in 2004 major developments are taking place in how student midwives are prepared for practice. One of these changes has seen the commencement in September 2006, of the first pre-registration BSc Midwifery education programme in Limerick.

The traditional route into midwifery was through nursing and this continues to be an option. Following a pilot project in Dublin and considerable negotiations with various stakeholders, an alternative model was agreed whereby students will be educated to register and practice as midwives having not previously undertaken nurse training. As such a 4 year programme has begun and is being run between the HSE West (Limerick, Clare, North Tipperary) and the University of Limerick in collaboration with the HSE South East who will facilitate some clinical placements.

This new venture requires different support systems to be in place hence the appointment by the HSE West (LCNT) of new roles. The roles are a Practice Development Co-ordinator (Midwifery) – Mary Doyle, Clinical Placement Co-ordinator (CPC) – Mary Ann O’Brien and Bernadette Toolan and an Allocation Liaison Officer (ALO) – appointment in progress. These people are based at the Regional Maternity Hospital Limerick.

The Midwife Practice Development Co-ordinator’s role is to develop, monitor and evaluate midwifery practice within the hospital and other care settings to ensure a high quality of midwifery practice as well as an appropriate learning environment for students. This post holder will also support the appointment of the CPC’s.

The CPC (Midwifery) will support pre-registration student midwives and nurses during the practice component of the programme while the ALO will be responsible for planning, organising and co-ordinating the clinical practice placements. Each of these roles are essential to facilitate the student midwife to achieve the learning outcomes for the course and the competency required to meet the EU Directive 89/594/EEC.



UNIVERSITY
of
LIMERICK
OLLSCOIL LUIMNIGH

STATISTICAL CONSULTING UNIT

A **Statistical Consulting Unit (SCU)** was established at the University of Limerick in 1999 to provide a professional statistical consulting service. The Unit is based within the Department of Mathematics and Statistics at the University.

A collaborator with the Centre of Biostatistics (formed within the Dept) we also run a consultancy service outside of UL predominantly for HSE personnel and Industry and we have also been called in to act as expert witnesses in court cases. These services are available (without cost) to clinicians and other personnel working for the HSE Mid-Western Area under a special arrangement set up between the SCU and the Health Board.

Directed and managed by Professor Don Barry (Professor of Statistics and Vice President Academic & Registrar) and Dr Jean Saunders (Executive Director SCU) the services offered by the **SCU** include:

- (a) One-to-one consultations offering statistical help and advice e.g. advice on designing experiments and questionnaires, clinical trials, sampling procedures, data entry, application and explanation of statistical methods, summarising data and interpretation of results.
- (b) Actual data analyses together with statistical reports that can be used as part of subsequent more detailed summary reports and/or journal papers.
- (c) The provision of short courses in statistical methodology and the use of particular statistical packages.

The SCU offers drop-in sessions at UL from 11-1 on Tuesdays and Thursdays in Room no D2029 in the main building at UL (for queries of up to 30 mins duration) and longer hour-long sessions that can be booked with the unit at any time. We can be called in at any point in a study from the planning stage (preferable) right through to the final analyses. We also offer consultation sessions at hospitals within the Region – appointments for these can be set up at any time.

In January/February and June/July each year we offer courses in surveys and questionnaire design, use of SPSS and Basic Statistical Methods as well as Experimental Design and (in the future) Structural Equation Modelling. As well as these regular twice yearly courses on University premises (that HSE personnel are welcome to attend) other courses can be arranged at any time during the year and all courses are subject to a charge.



All enquiries about these courses or requests for consultations should be directed to Dr Jean Saunders (contact details below):

Dr Jean Saunders
Executive Director
Statistical Consulting Unit
Dept of Maths and Statistics
University of Limerick
Limerick

t. 061 - 213471

m. 086 - 3866353

f. 061 - 334927

e: jean.saunders@ul.ie



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Your abstract should reflect the following suggested headings:

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For Further information please contact:

Catherine Kennedy, Information Scientist, National Institute of Health Sciences, Health Service Executive, Mid-Western Area, St. Camillus' Hospital, Shelbourne Road, Limerick t. 061-483975 f. 061-326670

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Abstracts should be structured to include as many of the following parts as appropriate:

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Providing the background for the study, this section should be informative and brief
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Defining why the study was conducted
- **Methodology**
Indicate the context, number and type of subjects or materials being studied, the principal procedures, tests or treatments performed
- **Results**
Confirming or refuting the hypothesis, supported by statistics if appropriate
- **Conclusions**
Stating the major new findings of the study and specifying what these findings add to what is known already
- **Presented** (if appropriate)
Listing meeting name, location, date(s), name and title of speaker
- **Funding** (if appropriate)
Indicating any sources of funding/sponsorship received which author(s) wish to have acknowledged

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4. Type the title in **bold-face**.
5. List all authors (last name, first name initial) under Title, indicating main author by superscript ¹ placed after the first name initial, the second author by superscript ² etc.
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Ms. Catherine Kennedy,
Information Scientist,
National Institute of Health Sciences,
Health Service Executive, Mid-Western Area,
St. Camillus Hospital,
Limerick.

t. 061-483975
m. 086-3812926
f. 061-326670

e: ckennedy@nihs.ie



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The piece of research should have been published in the 6-8 month period prior to December or June for inclusion in this section of the National Institute of Health Sciences Research Bulletin.

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Full Details of the name of publication, volume, issues, year, page range
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Listing meeting name, location, date, name and title of speaker
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f. 061-326670

e: ckennedy@nihs.ie



St. Camillus Hospital
Shelbourne Road
Limerick, Ireland

T: 061 483975
F: 061 326670
E: info@nihs.ie
W: www.nihs.ie