



LETTERKENNY GENERAL HOSPITAL

Welcome

'Research is to see what everybody else has seen, and to think what nobody else has thought'

Albert Szent –Gyorgyi, Hungarian Biochemist, Nobel Prize for Medicine 1937.

I wish to welcome you all to our second Annual Research Day Symposium. It is truly remarkable and exciting to see so many of our colleagues, both undergraduate and postgraduate, strive to enhance the care our patients receive through ongoing research.

I wish to individually address each category involved in both oral and poster presentations.

Like any large conglomerate, a hospital has many subspecialties and the integration of these departments is vital to its success and subsequent survival. We are all aware that Letterkenny General Hospital is well recognised as a centre of clinical nursing and midwifery excellence and as a promoter for the recruitment of advanced nurse practitioners. In fact, the first specialist nurse practitioner in urology in Ireland was appointed in Letterkenny General Hospital in 1999 and this has provided a template for urological practice throughout the country. I welcome and look forward to hearing from our allied health professional colleagues on the wide range of topics in their category and how their findings are being implemented in the ongoing care of patients.

To our medical students, those associated with Donegal through the NUIG Medical Academy and those from universities elsewhere, a sincere message of thanks for your focus and commitment to complete and enlighten us with the results of your endeavour over the last few months. Let this be an early stepping stone on your path to excel professionally. We wish you all the best throughout your lives both personally and professionally and look forward to you returning as interns, house officers, registrars and perhaps consultants in the years ahead.

As a doctor who works in Letterkenny General Hospital I am well aware of the demands on our junior medical staff. I congratulate you on achieving what very few of your predecessors have achieved – the discipline to combine a very busy clinical post with the desire to explore an area of clinical practice which for whatever reason appealed to you. You are a shining example of what can be achieved for those who follow in your path and your peers stand proud beside you today.

To our guest speakers, Ms Pusic, Prof. Kenny and Ms. Cody, I wish to formally thank you for honouring your commitment to be here with us today. May you have a very positive, enlightening and enjoyable time in Donegal. I very much look forward to your presentations and hope to learn from your involvement in developing successful research facilities where you work, which maybe we can adapt for the advancement of our own department here at Letterkenny General Hospital.

The goal of our Dept. of Education is to encourage all staff in the hospital to fulfil their potential academically, whether studying or in employment here, irrespective of department. We aim to continue to work side by side with our undergraduate Medical Academy colleagues and our colleagues in the Dept .of Nursing and Midwifery. We aim to continue to develop our postgraduate teaching programme

to our staff on a weekly basis with our lunch time lectures .We aim to provide an enlightening experience that allows for the promotion of research through our department. We aim for our students and most junior staff to return as more senior colleagues in the years to come and when not in Donegal to promote our hospital as an environment for excellent clinical teaching, excellent clinical practice and a site for ongoing medical research.

Go raibh mile maith agaibh as ucht teact anseo inniu.

Mr Charles McManus
Director of Medical Education
Letterkenny General Hospital

It give me great pleasure to introduce this booklet featuring abstracts from the research featured in our Second Research Day at Letterkenny General Hospital this Friday 23rd November 2012 . Letterkenny General Hospital has a long tradition of providing quality clinical education and engaging in clinical research with both Post Graduate Medical Education being delivered at the hospital and Under Graduate Nurse Education in conjunction with LYIT. In recent years and commensurate with the developing role of Letterkenny General Hospital, we have sought to substantially promote and develop the Education & Research mission of the hospital.

The launch last year of the Letterkenny Regional Hospital Annual Research Symposium marked a significant milestone in the development of the Clinical Education and Research role of our hospital. I am delighted to see this initiative continuing and indeed continue to expand as a celebration of the multi-disciplinary commitment to clinical research within the hospital.

As I noted last year the development of active research programmes not only benefits the participants but of greater importance participation in clinical trials and clinical research provide opportunities to our patients to benefit from cutting edge clinical developments and newly emerging treatment modalities. Furthermore, the active engagement of staff in clinical research contributes to the development of a highly skilled, up to date clinical environment and culture allowing patients to receive the very highest standards in clinical care. In this context, I am delighted to introduce today's Research Symposium and congratulate the organisers, on behalf of the Hospital Management Team, our staff, our patients and myself personally. I wish all the participants every success and am confident that today as with last year will prove a huge success and significant enhancement to our research agenda.

Seán Murphy
General Manager
Letterkenny General Hospital



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Research is an important core value of the undergraduate curriculum of the Medical Faculty at NUIG . The school is a leader at undergraduate and postgraduate level . The faculty is prominent internationally in areas of stem cell research and gestational diabetes . The Undergraduate students in 2011 won major awards nationally . Expectation that all faculty teachers commit to study in the Diploma or Master Degree in Medical Education and Research is high.

Currently NUIG School has a high European ranking, with further expectation of continuing to progress, to the top of the European Medical Schools rating within 5 years. The faculty aims to achieve this vision, through general professional training of undergraduate students and in addition to promoting teaching of research methods, (a higher ranking order).

Ninety years ago, Charles Best while still a medical student shared the Nobel Prize for discovering Insulin. He and co-workers patented and Eli Lilly extracted Insulin commercially within a year. This changed and changes countless millions of lives. This unique discovery and generosity was significantly influenced, by an undergraduate medical student.

*Brian Callaghan
Dean of NUIG Medical Academy
Letterkenny General Hospital*

At Letterkenny General Hospital today and in the future Nurses, Midwives, Students and Healthcare Assistants, will continue to have a vital role to play in the delivery of our health care services. The challenge is to reshape and redefine services to embrace the complexities of the 21st Century. Our vision for the development of Nursing and Midwifery practice at Letterkenny General Hospital combines a compassionate care giving approach with some of the most advanced technologies, which together provide the cornerstone of our commitment to our patients and their families.

A Nursing and Midwifery Strategy is critical in establishing a coherent direction by which nurses, midwives, students and healthcare assistants can develop and deliver appropriate, knowledgeable and skilled practice. This strategy is important for all our departments, divisions and people in Donegal and has been developed to support and complement activity in every area.

It is crucial that this strategy is underpinned with evidence and research from within the healthcare literature. I believe it is vital to our patients that we promote all research which is actively generated by our practitioners to ensure that we are delivering care which has a sound evidence base.

Dr Anne Flood



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GUEST SPEAKERS

Ms Andrea Pusic , MD MHS ,FRCSC



MD, University of Calgary (Canada); MHS, The Johns Hopkins University

Residencies: Dalhousie University (Canada); McGill University (Canada)

Fellowships: Memorial Sloan-Kettering Cancer Center

Board Certifications : Plastic Surgery

Clinical Expertise :Breast Reconstruction (with microvascular flaps, pedicled flaps, and implants); Head and Neck Cancer Reconstruction with Microvascular Tissue Transfer; Pelvic and Vaginal Reconstruction; Extremity Reconstruction; Pediatric Cancer Reconstruction

Ms Pusic's main research interest lies in assessing health-related quality of life among oncology patients. With grant support from the American Society of Plastic Surgeons, she has developed a questionnaire, the BREAST-Q, which measures satisfaction and quality-of-life outcomes among breast reconstruction patients. This questionnaire examines body image and psychological, social, sexual, and physical function, as well as satisfaction with the process of care.

Dermot Kenny, MD, FACC, FRCPI, DABIM (cardiovascular disease)



Current position: Professor of Cardiovascular Biology/
Director of the Clinical Research Centre, Adjunct Professor Biomedical Diagnostics Institute, Dublin City University.

Biography: Dermot graduated from the Royal College of Surgeons in Ireland in 1982. He completed his training in Internal Medicine in Dublin and moved to the USA in 1987 where he completed his cardiology fellowship and started his research career in coronary physiology and thrombosis. In 1998 he returned to Dublin to head up the first academic clinical research centre in Ireland. Professor Kenny maintains an active research role as an Investigator in the Blood Research Institute of the Blood Centre of Southeastern Wisconsin. He is adjunct Associate Professor of Cardiovascular Medicine in the Medical College of Wisconsin.

Teaching: Undergraduate 5-Year and Graduate Entry Medical Programmes. School of Pharmacy.

Research Areas: Thrombosis, basic cellular mechanisms and development of advanced diagnostics for platelet biology in patients with ischaemic heart disease.



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Anne Cody, Dipl.Biol., PhD
Head of Clinical and Applied Biomedical Research
Health Research Board



Dr Cody has a background in cell biology and spent ten years in research in Germany and Ireland. In her role as Head of Clinical and Applied Biomedical Research in the Health Research Board, she is responsible for fostering excellent clinical and applied biomedical research within a coherent health system. Over the last ten years, she has been instrumental in the development of a number of innovative funding initiatives, such as Clinician Scientist Awards, Clinical Research Facilities, structured PhD training, Translational Research Awards, and biomedical imaging. She is involved with the HRB funding of a cancer clinician trials network (ICORG), and is driving plans for future developments in clinical research infrastructure, in collaboration with co-funders and other stakeholders.

The Medical Education Department & Research Committee wish to extend their thank to all Pharmaceutical Sponsors who have supported our Research Symposium and Education Programme through out the year.



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***Annual Research Symposium Programme
Friday 23rd November, Glengesh Room
Education Centre, Letterkenny General Hospital***

8.30am Registration

9.00- Welcome- Mr S. Murphy, Mr C. McManus

First Paper Session Chair Person: Dr A. Flood– (7 minutes per speaker)

Adjudicator: Henry McKinney , Sinead O’Gorman.

“An Evaluation of the Effectiveness of the DESMOND Programme.”

Dr Randal Parlour, Kathleen Crerand

“An Evaluation of the Effectiveness of a Self Management Programme”

Dr. Randal Parlour (NMPDU) & Lynn Stoddart

“Insertion and management of Urinary Catheters”

Ms Lorna Baldrick, Ms Tina Porter, & Ms Aine Slevin.

“Attitudes of qualified vs. student mental health nurses towards an individual diagnosed with schizophrenia”

Rory Kavanagh, Central Sector Community Mental Health Team

“How appropriate is pre-diagnosis Breast Cancer Screening in patients presenting with Breast Cancer?”

Alison Johnston, Michael Sugrue Breast Centre North West, Letterkenny

“The Green Prescription Physical Activity Case Study

M. McCallion, A Youell, Crosse

10.00 First Guest Speaker Introduction by : Mr M. Sugrue.

“ Breast reconstruction-The Evolution of breast care in cancer patients ”

Prof Andrea L Pusic, MD, Plastic Surgeon, MSKCC Surgery Group

10.30 Second Paper Session Chair : Mr Kevin Moran - (7 minutes per speaker)

Adjudicator: Dr L. Bannan , Ms D. Jones

“The pattern and challenges of emergency surgery in a rural hospital implications for the next generation.”

Alan Sugrue, Michael Sugrue, Department of Surgery, Letterkenny Hospital, Donegal, Ireland

“D-Dimers in Emergency Department”

N. Mayoaran, S.O’Gorman Emergency Department, Letterkenny General Hospital, Donegal,

“Pre-operative chest x-ray in elective inpatients “

Dr. David Devlin ,Dr Louise Moran, Anaesthetics and Critical Care, Surgery

“Feeding patterns in preterm babies in NICU in Letterkenny General Hospital.”

Dr Qamar Ali,Dr Hafiz Shafiq Ahsan Butt, Dr Mathew Thomas

“A survey to assess protocol at Caesarean sections in maternity units throughout Ireland”

McHugh U, Bailey K Department of Anaesthetics, Letterkenny General Hospital, Co Donegal

“Defining the Characteristics of Heart Failure Patients: Diastolic vs. Systolic Failure ”

Dr. Nigel McCoy (Intern, Letterkenny General Hospital) and Dr. John Barton (Consultant Physician, Portluncula General Hospital)

11.30 Second Guest Speaker- Introduction by:- Mr C. McManus

“Developing tomorrow’s health care – the importance of research”

Anne Cody PhD, Head of Clinical and Applied Biomedical Research
Health Research Board

12.00 Lunch

Viewing of posters by Adjudicators: - , C. Cannon

12.45 - Third Paper Session Chair Person : Dr B. Callaghan (7 minutes per speaker)

Adjudicator: Dr. M .Scully , Dr K. Hanley

“Retrospective analysis of Admission and Discharge Criteria for People Presenting to Letterkenny General Hospital Emergency Department with Head Injuries.”

Shannon Kelly BSc. Hon, Student NUIG, Sinead O’Gorman Emergency Department Consultant
Letterkenny General Hospital

“Setting a Benchmark in Breast Margin Positivity Rates-Is it possible?”

Cillian McNamara, Ryan Sugrue, Sharon Curran, Michael Sugrue

“Does a positive radiological guided core of axillary node predict need for axillary clearance?”

Jacqueline YL Ting, Michael Sugrue, Katherine McGowan, Sharon Curran, Geraldine Cooley Ray
McLaughlin,

“Variable Indicative of Placement risk(VIP) comparing and Identification of Seniors At Risk (ISAR) in an Irish population on early patients being admitted through ED. ”

Shane McCool , Dr.Mulpeter,

“The Centricity Score - A novel new measurement in Breast Cancer Excision”

Ryan Sugrue, Cillian McNamara Michael Sugrue

1.35 Third Guest Speaker – Introduction by : Dr Brian Callaghan

“Platelets, predicting the future?”

*Prof Dermot Kenny, MD, FACC, FRCPI ,Professor of Cardiovascular Biology/
Clinical Research Centre Royal College of Surgeons in Ireland,.*

2.00 Coffee Break

2.30 Presentation of Awards by , Prof. Pusic , Prof D Kenny, Dr M . Scully .

Credits :- RCPI= CPD 5. Bord Altranais =CEU 4.

Posters

1. **“Introduction of Tri-sodium Citrate 46.7 % as a locking solution for haemodialysis catheters”**
G. McCrory, A. Stack, A. Mutwal, A. Mulher, M. Mulhern, HD Nursing Team, CNS Infection Control
2. **“Factors influencing response to the Hepatitis B vaccine in dialysis patients: A regional cohort study”**
P.McGuire , A Mohammed, Am Shaantier, A. Mutwallia , Letterkenny General Hospital
3. **“Breast Specimen radiology – an analysis of the evolution of the technique”**
Dr Gavin Sugrue , Mr Maurice Stokes Michael Sugrue Department of Breast Surgery, Mater Misericordiae Hospital, Letterkenny Hospital
4. **“An Evaluation of the Effectiveness of a Self Management Programme”**
Dr. Randal Parlour (NMPDU) & Lynn Stoddart (Nurse Lead for Long Term Conditions)
5. **“A partial testing of the minority stress model among gay male college students”**
McLaughlin, Chris University of Ulster & NMPDU HSE-West Flood, John Dublin Business School
Prentice, Garry Dublin Business School
6. **“Laparoscopic common bile duct clearance- a feasible safe option at a regional hospital”**
Alison Havelin, Mr. Michael Sugrue. General Surgery, Letterkenny General Hospital
7. **“A retrospective study of the quality of Warfarin control in atrial fibrillation patients as assessed by time in therapeutic range: A comparison of hospital anticoagulation clinic and GP monitored patients”**
Caoimhe Haughey, B.Sc (Hons) Medical Science, Galway-Mayo Institute of Technology. Project carried out in conjunction with the Haematology laboratory of Letterkenny General Hospital under the supervision of Triona Keogh.
8. **“Delivery of Accu-Chek education program for patients with type 1 diabetes: Time well spent? A clinical audit”**
Fiona Hegarty (Diabetes Specialist Dietitian), Anne Griffin (Diabetes Specialist Nurse), Anne Gavaghan (Diabetes Specialist Nurse)
9. **“Audit on the Use of IV Paracetamol in Letterkenny General Hospital”**
Joanne English, Pharmacy Department, Letterkenny General Hospital
10. **“Factors contributing to margin positivity in malignant skin lesion excision specimens”**
Kevin Farrell, Yr 4 , NUIG Student Mr Nevil Couse , Letterkenny General Hospital
11. **“Re-Audit of HbA1c in Children & Young People with Type 1 Diabetes”**
Ms Avril McCloskey¹, Ms Aine Slevin², ¹Paediatric Dept, ²Dept of Clinical Audit
12. **“Clinical Audit on Opioid Prescribing in Letterkenny General Hospital”**
Annalisa Mullan, Carmel O’Donnell, Stanley Nwabudike, Aine Slevin. Dept of Pharmacy, Dept of Palliative Care, Dept of Oncology, Dept of Clinical Audit, Letterkenny General Hospital.
13. **“Antithrombotic therapy and associated adverse events are common in emergency surgical admissions”**
Alan Sugrue, Michael Sugrue, Department of Surgery, Letterkenny Hospital, Donegal, Ireland

Title of Study: An Evaluation of the Effectiveness of the DESMOND Programme

Authors & department(s): Donegal Long Term Conditions Project .Dr Randal Parlour NMPDU, Kathleen Crerand, Diabetes Nurse Specialist, Dr Paul Slater, University of Ulster

Aims & objectives

To examine the impact of participation of patients with newly diagnosed type 2 diabetes in a structured diabetes education programme. This study focussed on determining any change in participants' attitudes, beliefs, behaviours and knowledge of factors relevant to diabetes self-management prior to and after completion of the programme

The intervention is the Diabetes Education and Self Management for Ongoing and Newly Diagnosed (DESMOND) programme, a structured group education programme for six hours delivered by trained healthcare educators in community settings in County Donegal.

Sample

DESMOND was delivered during 12 courses involving 69 participants with a recent diagnosis of type 2 diabetes. 27 participants completed the study.

Design

A quantitative repeated measures research design was used. A pre and post intervention survey comprising 6 questionnaires was designed including the Diabetes Self-Efficacy Scale, Self-Rated Health Scale, Health Distress Scale, Glucose Testing Scale, Illness Intrusiveness Scale and a diabetes knowledge test. The tool was self completed at the start and conclusion of the intervention. 27 completed participant questionnaires/tests were paired-matched according to demographic details.

Results

Participation in the programme was associated with significant increases in patients perceived general health and confidence in controlling their diabetes, particularly in relation to blood sugar levels, food selection and appropriate GP attendance.

Total mean Diabetes Self-Efficacy score increased at a statistically significant level. Overall health distress scores decreased significantly. Diabetes knowledge scores increased by 66% post intervention. The illness intrusiveness scale revealed significant reduction in level of interference physical well-being and diet.

Conclusion

The findings presented in this study show a clear increase in diabetes knowledge and produced changes in the participants' attitudes and beliefs regarding the impact of the illness on their life. Increasing evidence shows that self-management support reduces hospitalizations, emergency department use, and overall managed care costs. The DESMOND programme had a significantly positive impact on increasing the knowledge and confidence levels of participants. These changes have the potential to produce significant changes in people with diabetes and may help to reduce development of long and short term diabetes complications.

Title of Study: An Evaluation of the Effectiveness of a Self Management Programme

Authors & department(s): Dr. Randal Parlour (NMPDU) & Lynn Stoddart.
(Nurse Lead for Long Term Conditions)

Background

In Donegal the Chronic Disease Self Management Programme¹ was introduced in 2010 under the title 'Quality of Life Programme'. It was delivered across a number of practice settings as part of a strategic self-management approach for people living with chronic conditions and an evaluation study was commissioned. This evaluation provides evidence of the impact of the 'Quality of Life Programme' on the health and well-being of a sample of participants.

Aims and objectives

The overall aim of the study was to measure the impact of the 'Quality of Life Programme' on participants' knowledge, attitudes and behaviours

Sample/Methodology

Participants in the intervention were self-referring and recruited via adverts in local GP practices and hospitals and/or referred from health professionals. A test re-test survey methodology was used to measure the impact of the programme across two time intervals and a purposive sample of participants ($n=37$) were invited to complete a set of standardised questionnaires in order to measure the overall impact of change.

Data Analysis

The data were analysed in two formats. Where the scores for the two time intervals were considered independent, an independent T-Test was used to examine differences in mean scores across both intervals. In the second method of analysis the emphasis was on examining how individuals changed over time. A paired sample T-Test was used to measure the impact of change for the individual and the pattern of consistency of change in the sample.

Findings

The 'Quality of Life Programme' had a significant impact on the physical and emotional health of individuals who participated in it. This was particularly noted in the areas of self-efficacy, fatigue and the impact of the chronic condition upon the individual's daily life. Many of the findings reported with this sample are endorsed by findings outlined in the literature.^{1, 2, 3}

Conclusion

The positive benefits to be gained from the implementation of the 'Quality of Life Programme' on the health of the individual are significant. This has been proven to lower costs to the care provider whilst providing a person-centred, empowered individual with a chronic condition.

The gains are greatly facilitated by a supporting healthcare system and proper targeting of interventions at the various populations that would benefit more; the mastery of the most up-to-date intervention techniques; and integrated community linkage.

Title of Study: Insertion and management of Urinary Catheters

Authors & department(s): Ms Lorna Baldrick, Ms Tina Porter, & Ms Aine Slevin.

Aims & objectives

To examine practices of urinary catheter insertion and management to identify deficiencies. To establish if local practice is adhering to the local guideline and the new national SARI guidelines on urinary catheterisation and catheter care.

A concurrent audit of all adult in-patients with urinary catheters insitu in Letterkenny General Hospital on 06/05/2011(n=37). Patients performing Self Intermittent Catheterisation (n=2) were excluded from this audit. Data was collected from the Medical and Nursing notes and by direct observation by the auditors.

Data was collected by means of a questionnaire. Data was analysed using SPSS v.18.

Results

21/37 (56.8%):Reason for catheterisation documented.

2/37 (5.4%): Re-assessment date for review of need for catheter documented.

1/37 (2.7%) Outcome of re-assessment documented.

23/37 (62.2%) Catheter size documented.

9/37 (24.3%) Type of catheter documented.

9/37 (24.3%) Volume of sterile water in balloon documented.

37/37 (100%) Observations by the auditor, the catheter bag positioned below level of patient's bladder.

34/36 (94.4%) Bed bag supported by appropriate catheter stand below level of bladder.

Conclusion

In view of deficiencies found the following action plan is underway:

- Re-launch of recently reviewed best practice statement on urinary catheterisation & catheter care, also a launch of the guideline on discharge of patients with indwelling urinary catheter & catheter care.
- Catheter insertion checklist for each catheterisation.
- Introduction of a care bundle for insertion and management of urinary catheters.
- Preferred type of catheter as per research are hydrogel catheters. Use of these catheters promoted in ongoing staff education programmes.
- Home Care Pack for patients discharged from hospital with urinary catheter.
- IPMS generated discharge letter for GP and PHN to follow up on catheter care.

Title of Study: Attitudes of qualified vs. student mental health nurses towards an individual diagnosed with schizophrenia

Authors & department(s): Rory Kavanagh, Central Sector Community Mental Health Team

Aims & objectives

This research is the report of a study which sought to compare the attitudes held by student and qualified mental health nurses towards individuals with schizophrenia in the Republic of Ireland. Media portrayals of individuals with schizophrenia often include images of aggression and violence. With global initiatives aimed at reducing the stigma and exclusion associated with mental illness, the attitudes of those who care for people with schizophrenia are of particular interest. A survey was administered to 66 student mental health nurses, and 121 qualified mental health nurses. Participants completed the community attitudes to mental illness scale¹ and the social interaction scale² in 2009. Multivariate analysis of variance was used to test for the effects of qualification, work setting, years of experience and education on the measures.

Results

Nurses employed in a community setting held more positive attitudes, when compared to colleagues who worked in an inpatient setting, as measured by the community mental health ideology subscale ($p = 0.025$), indicating their desire to promote community care for individuals with schizophrenia. Nurses working in an inpatient setting held more socially restrictive attitudes indicating they felt individuals with schizophrenia were dangerous and should be avoided as measured by the social restrictiveness ($p = 0.037$). These findings were statistically significant at the $p < 0.05$ level.

Conclusion

Mental health nurses must be alerted to the fact that holding negative attitudes may adversely affect the therapeutic relationship and ultimately lead to stigmatisation and its negative consequences.

Title of study: How appropriate is pre-diagnosis Breast Cancer Screening in patients presenting with Breast Cancer?

Authors & department: Alison Johnston, Michael Sugrue Breast Centre North West, Letterkenny.

Introduction

Early detection of breast cancer optimizes survival. Appropriateness of breast screening and assessment in patients diagnosed with breast cancer has not been studied. This study assessed whether patients with breast cancer had been evaluated in line with international standards prior to their diagnosis.

Methods

A retrospective review of 100 consecutive patients with breast cancer between January 2010 -March 2011 at Letterkenny Hospital was undertaken. Appropriate screening was defined as biennial in 50-65 year olds. Biennial mammography was also deemed appropriate for 40-49 year olds with moderate / high family history risk (NICE¹ criteria or IBIS² score >17%). Patient demographics, diagnosis date, stage and previous visits to a breast clinic or mammogram were documented. Patients with known breast cancer were excluded (n=6).

Results

100 consecutive patients, mean age 61.8 (range 29-96), were studied. 62/100 (62%) had appropriate screening. 38/100 (38%) did not have a mammogram or risk assessment completed. The stage of breast cancer is shown in table 1

Tumour stage	Appropriately screened (n=62) (%)	Inappropriately screened (n=38) (%)
Stage 0	9 (15%)	5 (13%)
Stage 1	14 (23%)	9 (24%)
Stage 2	30 (48%)	12 (32%)
Stage 3	7 (11%)	5 (13%)
Stage 4	2 (3%)	7 (18%)

$p < 0.001 \chi^2 df 4$

Conclusion

This study identified significant opportunity to improve breast screening in asymptomatic ladies and risk assessment in family history cohorts. Failure to assess resulted in significantly later stage of presentation breast cancer. If international standards³ were applied to Donegal a reduction in breast cancer mortality should occur.

Title of Study : The ‘Green Prescription’ Physical Activity Case Study

Authors & department(s): McCallion, M, Youell, A, Crosse, A. Dept. Applied Science, Institute of Technology Sligo, Ash Lane, Sligo. Health Promotion Dept., HSE West, Letterkenny, Co. Donegal.

Introduction:

This Green Prescription programme, adapted from a New Zealand Green Prescription National programme, involved referral of patients by the GP to community walks and was piloted in County Donegal. There is evidence to suggest that physical activity interventions in primary care are an effective means to increase activity levels, particularly walking^{2,3}.

Aims:

This case study aimed to outline the process of implementing the programme, its’ feasibility, acceptability and initial effects on referred walkers and primary care practice in relation to physical activity in one community. Recommendations regarding further development of the programme were also made.

Methods:

The research design was primarily qualitative with two focus groups (referred walkers and community walkers) and five interviews (general practitioner, support worker, walking leader, community leader and programme co-ordinator).

Results:

Many aspects of the model were successfully implemented and all stakeholders were positive about the programme, while making suggestions for improvement. Patients’ self reported benefits included; increased physical activity levels; decreased blood sugar levels in diabetics; decreased bodyweight; reduced pain, stiffness and use of medication and making greater social connections within the community. Increased self confidence to undertake physical tasks including more walking as a result of the programme was prominent. The GP saw benefits in having a structured programme for patients compared to giving advice but cited time constraints as a consideration. The GP referred to the transition ‘from patient to walker in the walking group’.

Conclusion:

This programme provides real possibilities for primary care to refer patients to a community-based programme and opportunities for communities to support members. Evaluation of the model as it is refined in a more comprehensive roll-out is recommended, including establishing the best method of engaging and supporting GPs and communities to implement the programme.

Title of Study :The pattern and challenges of emergency surgery in a rural hospital
- implications for the next generation.

Authors & department(s): Alan Sugrue, Michael Sugrue Department of Surgery, Letterkenny Hospital, Donegal, Ireland.

Introduction:

Rural hospitals provide a pivotal role in delivery of Emergency Care. Understanding emergency admissions is crucial to planning surgical services.

Aim:

This study examined the pattern and co-morbidities of emergency surgical admissions to a rural hospital.

Methods:

A prospective ethically approved study was undertaken in a 350 bed rural hospital between 18th April to June 10th 2011 on all consecutive emergency surgery admissions.

Results:

In 8 weeks there were 3193 admissions to the hospital, 2932/3191 (91.9%) were emergency and 417/2932 (14.2%) were emergency surgical admissions. The mean age 47.6 years (range 0 -97 years). 116(27.8%) underwent emergency surgery, the average length of stay 4.1 days. The most common system involved lower GI 136 patients (32.6%), 71(17.0%) upper GI, 70(16.8%) urology, 66(15.8%) trauma, 26 (6.2%) vascular and others 48 (11.5%). The average time of admission 13:48; Tuesday was busiest day. In adults (n= 357, >18 y.o) the three most common diagnosis were 38 (10.6%) appendicitis, 35 (9.8%) head injury and 32 (8.9%) with renal colic. The pediatric population (n= 60, <18 y.o) the most common diagnosis was appendicitis 22 (36%), 13 (21.6%) head injuries and 3 (5%) non-specific abdominal pain. In the adult population 118 (33.1%) had significant co-morbidity on admission, top three were; cardiac co-morbidity in 82 patients (69.5%) followed by GI 27 (22.9%) and endocrine 23 (19.5%).

Conclusions:

This study identified the importance of Emergency Surgery and its range of presentations. Broad training in General Surgery is required to meet patient needs in a rural hospital setting

Title of Study: Clinical Audit on D-Dimers in Emergency Department

Authors and department(s): N. Mayoaran, S.O'Gorman, Emergency Department, Letterkenny General Hospital, Donegal, Ireland

Aim and Objectives:

D-Dimer test is frequently used to triage the patients with suspected Venous Thrombembolism (VTE). Recently there is an increased inappropriate use of D-Dimer tests noted in the Emergency Department. Our aim is to find the number of inappropriate D-dimer tests, and to take necessary measures to reduce them.

Methodology:

Positive D-Dimer does not rule in VTE. - If pre test probability is moderate or high (>17%) a negative D-Dimer doesn't rule out VTE. - If pre test probability is low (<3%) a negative D-Dimer safely rules out VTE. A prospective audit was carried out on the inpatient wards over a two day period in February 2012 with the exception of Paediatrics, Maternity, ICU and post op patients (n=16).

Retrospective analysis of D-Dimer requests from 50 consecutive patients presented to the ED between 10th and 25th of September 2012. Data collected from the laboratory systems and patient notes.

Conclusion:

Details of 50 patients (26 Male, 27 Female) were analysed. Age range was from 18 to 95 years. Median age was 56.5. D-Dimer test was positive in 18/50 and negative in 32/50 patients. 6/50 patients had previous history of VTE. Pre test scoring system (Wells Score) was documented only in 16 cases. 10 patients had radiological imaging (2 CTPA,8 Doppler) for VTE,only 2 patients had positive findings. 15/50 Patients had other confirmed diagnosis (except VTE). This audit confirms that there is an increased inappropriate request of D-Dimers test in our department. This could be as a result of blood test being requested prior to clinical assessment of the patient by the doctor. Further education for staff on appropriateness of D-Dimer test is warranted.

Title of Study: Pre-operative chest x-rays in elective inpatients

Authors & department(s): Dr. David Devlin ,Dr Louise Moran, Anaesthetics and Critical Care, Surgery

Background

From experience working on a busy surgical ward, it was observed that a number of elective preoperative patients were having chest X-rays performed as part of the standard work up prior to their surgery, even though there is little evidence for their use in the absence of signs and symptoms of cardiopulmonary disease.

Goal

To examine the prevalence and appropriateness of pre operative chest X-rays over a period of two, one month blocks, amongst elective in-patient admissions to surgical services consisting of breast surgery, general surgery, colorectal surgery, orthopaedics, urology and obstetrics and gynaecology; and to track the changes in prevalence following basic information sessions aimed at NCHDs and dissemination of a hospital guideline relating to pre-operative investigations.

Methodology

A paper questionnaire was designed, to gather information about the patient, their surgery, and their X-ray request. A more detailed discussion of the method employed in conducting the audit is given in the methodology section.

Results

It is envisaged that this audit will lead to a reduction in the number of unnecessary chest X-rays being requested as a routine for preoperative patients, and that this would be achieved through ongoing clinical education of those admitting and assessing these patients.

Title of study: Feeding patterns in preterm babies in NICU in Letterkenny General Hospital.

Authors & department(s): ,Dr Qamar Ali,Dr Hafiz Shafiq Ahsan Butt, Dr Mathew Thomas.

Aims & Objectives

1. This study aimed to document the feeding patterns in preterm babies and quantify when they regained birth weight after the initial physiologic drop in weight.
2. Type of milk feed being used in NICU whether expressed breast milk or formula feeding.
3. Average timing of starting first feed.

Study Design

A chart review was conducted for all neonates born <37 week & >28 week gestation admitted to NICU in a secondary level perinatal facility over a 12 months period (n=75). Complete data relating to attainment of feeding milestones was available on 61 neonates.

Results

We subdivided preterm babies into 3 groups depending upon gestational age, i.e 28-32 weeks, 32+1- 35 weeks and late preterm 35+1-37 weeks. Formula feeding was given to 75.5% babies, Expressed breast milk was given to 15% and 9% were given both.

Conclusion

Feeding type was more in favour of Formula feeding and average timing of starting feed was inversely proportional to the gestational age and so was the day of regaining birth weight.

Title of study Title: A survey to assess protocol at Caesarean sections in maternity units throughout Ireland

Authors & department(s): McHugh U, Bailey K Department of Anaesthetics, Letterkenny General Hospital, Co Donegal

Background:

Early skin-to skin contact between mother and baby in the time immediately following birth has been shown to have an important impact on the long-term development of humans. According to mammalian neuroscience, this intimate contact evokes neurobehaviours ensuring fulfillment of basic biological needs. This time may represent a psycho-physiologically sensitive period for programming future physiology and behaviour¹. Furthermore, separation of mother and baby in the immediate post-delivery period can have a negative effect on breastfeeding² and thus deprive the baby of the many benefits this nutrition source provides³.

Unfortunately, delivery by Caesarean section can act as a barrier to this essential bonding as it necessitates a period of recovery for the mother. Patients must meet specified criteria which determine suitability for discharge from the post-anaesthetic care area⁴. During this time, anaesthetic factors or hospital logistics may mean it is not possible for the baby to remain with the mother. In Ireland, the rate of Caesarean sections was 26.1% in 2009, and this figure is continuing to rise⁵.

Aim:

In our unit, Caesarean sections take place in the main theatre complex, which is remote from the post-natal ward. The current hospital protocol dictates that following delivery the baby returns to the ante-natal ward with the birthing partner. We wished to assess the protocol in other maternity units throughout the country and hope that we can learn from them and implement changes.

Methods:

There are 19 units throughout Ireland which provide public maternity care, including ours. A telephone survey was carried out of the other 18 units. Theatre manager was contacted in each unit and was able to give the required information.

Results:

The baby remains with the mother post-delivery in 50% of units, but does not in 44%; 6% (1 unit) were able to facilitate this approximately 20% of the time, staff depending. In all of the units in which the baby and mother stayed together, breast feeding could be initiated in the recovery area, if desired.

In units where the baby was able to stay with the mother in the recovery area, they were accompanied by the birthing partner in all cases, but a midwife in only 56% of cases. In dedicated maternity hospitals, the recovery nurses are often dually qualified and have midwifery expertise also, thus a dedicated midwife was often not deemed necessary.

Conclusion:

For the safety of the mother, a period of time in the post-anaesthetic care area following Caesarean section is essential. However, with the correct facilities and staffing, it is possible to allow the baby to remain in the recovery area also, to allow essential bonding and early breastfeeding.

We now need to consider what changes could be made to our current protocol to allow implementation of an improved standard of care for mother and baby in the immediate post-delivery period.

Title of Study: Defining the Characteristics of Heart Failure Patients: Diastolic vs. Systolic Failure

Authors & department(s): Dr. Nigel McCoy (Intern, Letterkenny General Hospital) and Dr. John Barton (Consultant Physician, Portlucan General Hospital)

Aims & objectives

This work aims to identify the risk factors for the development of systolic and diastolic heart failure by examining the characteristics of patients attending heart failure clinic. Further to previous research indicating a relationship between renal function and the specific type of cardiac dysfunction manifesting in heart failure patients, lipid and glycaemic dysfunction in these patients was assessed and the relationship between these factors and the type of cardiac dysfunction manifested was investigated. The relationship of gender, with both renal function and cardiac dysfunction was also examined.

Methods

The chi-square test was used to test for significant associations between renal function (eGFR), glycaemic, lipid and blood pressure control and the presence of diastolic or systolic dysfunction. The relationship with gender was inspected using the same method. To analyse the relationship between age in diastolic or systolic dysfunction and with renal impairment, a one-way analysis of variance was used. In the patient group with systolic dysfunction the ejection fraction was correlated with eGFR and the eGFR correlated with patient age across both groups.

Results

Isolated diastolic dysfunction was identified in 21% percent of heart failure clinic attendees. A previously observed relationship between renal impairment and diastolic dysfunction became statistically non-significant with an increased sample size, $\chi^2(1, N = 132) = 2.32, p < 0.128$. Renal impairment was significantly more common among female patients with heart failure, $\chi^2(1, N = 132) = 13.764, p < 0.0001$. Female heart failure patients are older, mean age 76 years, while the mean age is 71 years for men, a difference determined to be statistically significant using a one way ANOVA, $F(1, 140) = 4.628, p < 0.05$. Evidence of poor lipid, glucose or blood pressure control was not significantly different in either the diastolic or systolic group, for lipid control - $\chi^2(1, N = 56) = 0.83, p < 0.774$, glucose control - $\chi^2(1, N = 54) = 0.002, p < 0.965$, blood pressure - $\chi^2(1, N = 22) = 0.010, p < 0.919$.

Conclusion

The demographics of patients attending the heart failure clinic were broadly similar to those reported in various other studies which have recognised both the increased age of patients with diastolic heart failure in comparison to those with systolic failure and the larger proportion of women presenting with diastolic heart failure. The prevalence of diastolic dysfunction, at 21% is slightly below estimates of prevalence from epidemiological data but is in agreement with the idea that clinical detection of diastolic heart failure may be lower than suggested in epidemiological studies [1], whether this is under-detection in the clinical setting or overestimation in epidemiological studies is still uncertain. The overall proportion of heart failure patients that are female, at 22% has not been widely replicated to the same extent in the literature, though there are studies providing some evidence of similar proportions occurring in other settings [2]. This may be a result of decreased presentation by the female population, although the possibility that diastolic dysfunction is actually an acute form of heart failure or precursor condition to the more chronic and irreversible form that is systolic failure, has been proposed [3] and provides a possible partial explanation, with females generally developing the risk factors for heart disease later than males and thus presenting later with a less advanced stage of the disease. Although the previously noted significantly increased prevalence of diastolic heart failure in patients with renal function does not hold as statistically significant with the addition of further data, the trend remains for patients with renal impairment to present more frequently with diastolic heart failure.

Title of Study Retrospective analysis of Admission and Discharge Criteria for People Presenting to Letterkenny General Hospital Emergency Department with Head Injuries

Authors & department(s): Shannon Kelly BSc. Hon, Sinead O’Gorman Emergency Department Consultant Letterkenny General Hospital

Aims & objectives

This study reviewed the patients presenting to the Emergency Department at Letterkenny General Hospital with closed head injuries and determine whether their subsequent admission or discharge followed the current SIGN guidelines, including the indications for immediate or delayed CT scanning.

Methods

All patients presenting with isolated head injuries (excluding those associated with polytrauma) were included. Data was collected regarding presentation day and time, age, sex, method of injury, presenting symptoms, treatment, disposition, CT scanning and length of stay. All statistical analysis was carried out using SPSS software.

Results

179 patients (4.7% of total presentations) were included. The age range was 3-100 years and 60% were under 25. 68% were male and 32% female. Falls accounted for 51.9% of injuries, MVCs and assaults 12.8% (each) and sports related injuries 10.1%. Alcohol was associated with 25% of the presentations and 20.7% were intoxicated on presentation. The most common presenting symptoms were loss of consciousness (29.5%), amnesia (20.7%), headache (21.2%) and vomiting (15.1%). 51 (28%) of patients had an indication for CT and 27 (53% of those with indication) received CT scans with 19 done emergently and 8 delayed. No scans were done without an indication. 67 (37%) were admitted to hospital. 37 (55%) were discharged within one day. No patients were admitted without an indication.

Conclusion

SIGN guidelines for Hospital admission were closely followed. SIGN guidelines for CT scanning were not closely adhered to and closer adherence would result in a significantly greater number of CT scans across all ages, possibly without a decrease in admission rates.

Title of Study: Setting a Benchmark in Breast Margin Positivity Rates-Is it possible?

Authors & department(s): Cillian McNamara, Ryan Sugrue, Sharon Curran, Michael Sugrue

Aims and Introduction

Balanced breast conserving surgery should ensure margins are clear yet maintain cosmesis. A microscopically clear margin is crucial in minimizing the risk of local recurrence. Benchmarks in margin positivity are not clearly defined. Rates of re-excision vary internationally with an average of 25% ranging (20%-30%)(1). This study evaluated positive margins and the need for re-excision in patients undergoing wide local excision.

Methods:

A retrospective review of patients undergoing wide local excision between 2008 and 2012 was undertaken at a single designated Breast Cancer Service in Letterkenny. Margin shaving was undertaken at an individual basis. Margins were considered to be positive if the tumour went to the inked margin, distance from the margins was noted.

Results:

109 patients (1 bilateral) were studied, mean age 58.9 (range 28 to 88 years). 75 (68%) had palpable lesions. Shaves were done in 57(51.8%) of cases. Ductal type accounted for 98/110 (89%), 7/110 were lobular (6.4%), 3 tubular (2.7%), 1 mucinous (0.9%) and 1 squamous (0.9%). 21/110 (19%) had positive margins. 11 were radial, 8 anterior, 1 posterior and radial and 1 other. 3/21 positive margins were multifocal and 18 were focal.

Of the 21 patients with positive margins, 10 (47.6%) had no further surgical procedures and proceeded to adjuvant therapy, 4 (19.1%) underwent a mastectomy and the remaining 7 (33.3%) underwent re-excision.

Conclusion

Margin positivity rates and need for re-excision at Letterkenny are below international average reducing the need for multiple operations. A benchmark to include confounding variables is possible and we propose 10-20% margin positivity as acceptable.

Title of Study: Does a positive radiological guided core of axillary node predict need for axillary clearance?

Authors & department(s): Jacqueline YL Ting, Michael Sugrue, Katherine McGowan, Sharon Curran Geraldine Cooley Ray McLaughlin, Department of Breast Surgery Letterkenny and Galway University Hospitals

Aims and objectives

Breast cancer related axillary surgery has undergone a paradigm shift with sentinel node assessment. Recently there is controversy regarding need for axillary clearance in patients with micrometastasis (1,2). It is unclear whether a positive pre-operative US-guided core indicates macroscopic or microscopic disease. The Z11 study suggested patients with microscopic disease should not undergo axillary clearance (3). This study evaluated the nodal clearance pattern in patients with positive axillary Ultrasound-guided core biopsy.

Methods

An ethically approved retrospective review of breast cancer patients in Letterkenny Hospital and Galway University Hospital between January 2010-May 2012 was undertaken. Patients undergoing neoadjuvant chemotherapy and without pre-operative axillary ultrasound were excluded. Fischer's exact and chi-square tests were used to examine categorical data. Continuous variables were examined by t-tests and ANOVA. Sensitivity and specificity were determined by contingency tables.

Results

Between January 2010-May 2012, 270 patients have been reviewed. Mean age was 61.81 ± 14.68 . All patients were female. 66 patients were US-guided core biopsy positive and 78.8% has macrometastasis, 1.9% with micrometastasis, 15.3% has extracapsular involvement and 1.9% with capsular involvement. US-guided core biopsy showed 98.1% sensitivity and 96% specificity. Positive predictive value is 98.1% and negative predictive value is 96%. US-guided core biopsy had a sensitivity to detect macrometastasis of 78.8% and specificity is 100%.

Conclusion

This study, one of the first to evaluate core biopsy, demonstrates that a positive pre-operative Ultrasound-guided core biopsy correctly predicts macroscopic involvement of axillary nodes. Patients can therefore continue to confidently proceed to axillary clearance without a sentinel node.

Title of Study : Variable Indicative of Placement risk(VIP) comparing and Identification of Seniors At Risk (ISAR) in an Irish population on early patients being admitted through ED.

Authors & department(s): Shane McCool , 4th Yr NUIG Student, Dr Ken Mulpeter , Letterkenny General Hospital

Aims & objectives.

This research project aims to identify predictive accuracy of two Geriatric screening tools, the Variable Indicative of Placement risk (VIP) and the Identification of Seniors At Risk (ISAR), at identifying which elderly patients would be best suited to being under the care of a Geriatrician and/or admitted to a Geriatric ward, on arrival at the Emergency Department. We also want to determine if there is a correlation between the initial score of the screening tool and the risk of adverse outcomes for the patient.

Methods

The project was undertaken by one medical student who, over the course of 8 weeks, assessed the initial VIP and ISAR scores, along with the information contained in the results section below, of 200 medical patients over 65 years of age, admitted to Letterkenny General hospital, through it's E.D.

Results

VIP score correlated with: (P-values of results) P-value<0.01-Statistically significant.

- Age-0.007
- How many admissions in the past year-0.087
- Admitted to a Geriatric ward-0.093
- Admitted under the care of a Geriatrician-0.141
- AMTS score-0
- Length of Stay in hospital-0.02
- If they received PT/OT OR ST-0
- If they were sent home after discharge-0.119

ISAR score correlated with: (P-values of results)

- Age-0.01
- How many admissions in the past year-0
- Admitted to a Geriatric ward-0.074
- Admitted under the care of a Geriatrician-0.092
- AMTS score-0
- Length of Stay in hospital-0.098
- If they received PT/OT OR ST-0
- If they were sent home after discharge-0.045

Conclusion

Regarding the VIP score, there was a statistically significant relationship between an increasing score and increasing Age of the patient, AMTS score, length of stay in hospital and if they received PT/OT or ST. Regarding the ISAR score, there was a statistically significant relationship between an increasing score and increasing Age, Number of admissions in the past year, AMTS score, if they received PT/OT or ST and if they were not sent home after discharge.

Title of Study :The Centricity Score - A novel new measurement in Breast Cancer Excision

Authors & department(s): Ryan Sugrue , Cillian McNamara Michael Sugrue , Department of Breast Surgery Letterkenny General Hospital.

Background

Ideally surgery should achieve a clear margin in wide local excision (WLE) balanced with excellent cosmesis, reduced need for reexcision and better oncological outcomes. There are no current scoring systems to aid in complete tumour excision or assess the surgeon's performance in accurately excising the tumour. This study describes a novel scoring system to determine the surgeons performance in centrally locating the cancer during conservative breast surgery.

Methods

The scoring system involved the determination of the centre point of the specimen and the tumour within the specimen. Using the Agfa IMPAX 6.4 radiological imaging system 10 patients who underwent WLE had their intra-operative surgical specimen x-ray analysed. The centricity score was defined as $100 - (\text{ICD}/\text{SD} \times 100)$, where ICD is the inter-centre distance between the specimen SD and the tumour's centre. A score of 100 indicates the tumour was dead centre of the excised specimen.

Results

10 patients with ductal breast cancer, mean age 56year (range 44-71) were studied. The mean tumour and specimen diameter was $22\text{mm} \pm 7$ (range 11-30) and $22\text{mm} \pm 7$ (range 11-30) respectively . The mean specimen weight was $129\text{g} \pm 7$ (range 29-240). The mean centricity score was 77 ± 7 (range 65-86).

Conclusion

This study the first to descibe a radiological scoring system for patients undergoing WLE, identified a novel centricity score. In this study the tumour was well centered acheiving a high score. This score could potentially be used as guide to exicision and a teaching tool for breast surgeons and an international benchmark in surgical performance.

Title of Study :Introduction of Tri-sodium Citrate 46.7 % as a locking solution for haemodialysis catheters

Authors & department(s):- G. McCrory, A. Stack, A. Mutwali, A. Mulhern, M. Mulhern, HD Nursing Team, CNS Infection Control, Letterkenny General Hospital.

Background:

Catheter related bacteraemia (CRB) is a major problem in haemodialysis and contributes substantially to morbidity and mortality. Biofilm, a complex aggregation of microorganisms growing within the catheter lumen, is an important determinant in the pathogenesis of CRB's. Its formation facilitates bacterial adhesion and colonization in addition to platelet aggregation and coagulation activation, all of which may predispose infection and thrombosis.

Method:

We conducted a prospective study to evaluate the impact of Tri-sodium Citrate (TSC) 46.7 %, an antimicrobial locking agent, on the incidence of bacteraemia at our centre from Nov 2009 to Nov 2010. Comparisons were made with a similar cohort between Nov 2008 and Nov 2009 whose catheters were locked with unfractionated Heparin 5,000 i.u./ml. Measurable outcomes included the 1) incidence of CRB bacteraemia (events per 1000 catheter days); 2) frequency of thrombolytic intervention and, 3) the associated cost burden. The number of vials of Alteplase (TPA) used for catheter malfunction was used as a proxy for thrombosis during the study period.

Result:

CRB rates fell from 0.44 events per 1,000 catheter days in 2008-2009 to 0.24 in 2009-2010. The introduction of TSC resulted in a 46% reduction in CRB's. Total TPA use reduced by 70%. Hospital admission rates and costs incurred due to hospitalization and associated treatment reduced due to a lowered CRB incidence during the study period.

Conclusion:

Introduction of TSC 46.7 % as an anti-infective locking device in haemodialysis catheters leads not only to substantially reduced CRB rates, but equally important catheter malfunction and costs.

Title of Study:- Factors influencing response to the Hepatitis B Vaccine in dialysis patients: A regional cohort

Authors & department(s) P. McGuire, A Mohamed, M Shantier, , A Mutwali, Regional Kidney Centre, Letterkenny, Donegal, Ireland.

Background / Aims

Haemodialysis patients have reduced immune function and are an at risk group for infection with blood borne viruses. Infection with the hepatitis B virus (HBV) leads to chronic liver disease in 3-10% of dialysis patients. It has been shown that dialysis patients exhibit a reduced immune response to the HBV vaccine when compared to the normal population.

Method.

Study Design:

- Retrospective observational study.
- 93 chronic haemodialysis patients,
- Regional Kidney Centre
- Recruitment: At least 3 months on haemodialysis program, Letterkenny and Sligo General hospitals
- This study aimed to determine response rate for HBV vaccination among a regional dialysis cohort in North-West region of Ireland, and to identify factors that associated with non-responders to vaccination.

Result

Response status for HBV vaccination classified into three groups: poor responder, intermediate responders and a good responders as per unit and national protocol. SPSS software was used for statistical analysis

Conclusion

- Total of 54 responded to the vaccine. This represented a success rate of 58%, a figure in keeping with previously documented reports (4)
- Younger age, diabetes mellitus and overweight patients were associated with non-response to the HBV vaccine. However this association did not reach a statistical significance. Similar results was obtained from previous studies. (5)
- No significant difference between groups regarding main dialysis core-indicators including anaemia, dialysis adequacy, vascular access and renal bone disease.
- No relationship was seen between immune response to HBV vaccination and the average white cell count for each response cohort.
- Good response group tend to have a lower lymphocyte count, yet had higher immunoglobulin levels than non-responders suggesting that the poor immunological response seen in dialysis patients in response to the HBV vaccine may be more due to decreased lymphocyte function rather than overall production.
- Limitations and strengths of study: Retrospective studies and relatively smaller sample size. However it will open the door for a larger multi-centre studies, especially with sacristy of data in this field.

Title of Study :- Breast Specimen Radiology –an analysis of the evolution of the technique Dr

Authors & department(s):- Gavin Sugrue , Mr Maurice Stokes Michael Sugrue
Department of Breast Surgery, Mater Misericordiae Hospital, Letterkenny Hospital

Introduction:

Initially breast Specimen Radiography was used to aid the diagnosis of breast cancer. With the evolution of both imaging and pathology, breast specimen radiology is now utilised intraoperatively for margin analysis and during minimally invasive image guided biopsies.

This study traces the evolution of breast specimen radiology.

Methods

Computerised and manual searches via Pubmed, MD consult were undertaken to obtain relevant publications.

Results:

88 articles relating the breast specimen x-ray were reviewed. Salomon in 1913 was the first to describe x-ray evaluation of breast cancer. Warren in 1930 reported the first clinical use of mammography. In 1969 Fingerhut described the first self-contained specimen unit, Faxitron 804, for breast specimen radiology. Different techniques and indexes have evolved as shown in table1.

Current publications cite the use of either Faxitron or Digital breast specimen x-ray either in the operating theatre or radiology

Table 1

Breast Specimen radiology techniques since 1913

Breast Sliced imaging
Compression
Water Immersion
Positive Node Xerography
Margin Index
Biplaner imaging
Wire grids
Specimen Containers
Intraoperative digital specimen mammography

Conflicting predictive values of the specimen radiology have been reported over the last 20 years

Conclusion:

This study has identified a remarkable change in approach to specimen x-ray since breast radiology was first reported 99 years ago. Intra-theatre specimen radiography is an important therapeutic and educational adjunct in breast imaging.

Title of Study: An Evaluation of the Effectiveness of a Self Management Programme

Authors & department(s): Dr. Randal Parlour (NMPDU) & Lynn Stoddart (Nurse Lead for Long Term Conditions)

Background

In Donegal the Chronic Disease Self Management Programme¹ was introduced in 2010 under the title 'Quality of Life Programme'. It was delivered across a number of practice settings as part of a strategic self-management approach for people living with chronic conditions and an evaluation study was commissioned. This evaluation provides evidence of the impact of the 'Quality of life Programme' on the health and well-being of a sample of participants.

Aims and objectives

The overall aim of the study was to measure the impact of the 'Quality of Life Programme' on participants' knowledge, attitudes and behaviours

Sample/Methodology

Participants in the intervention were self-referring and recruited via adverts in local GP practices and hospitals and/or referred from health professionals. A test re-test survey methodology was used to measure the impact of the programme across two time intervals and a purposive sample of participants ($n=37$) were invited to complete a set of standardised questionnaires in order to measure the overall impact of change.

Data Analysis

The data were analysed in two formats. Where the scores for the two time intervals were considered independent, an independent T-Test was used to examine differences in mean scores across both intervals. In the second method of analysis the emphasis was on examining how individuals changed over time. A paired sample T-Test was used to measure the impact of change for the individual and the pattern of consistency of change in the sample.

Findings

The 'Quality of Life Programme' had a significant impact on the physical and emotional health of individuals who participated in it. This was particularly noted in the areas of self-efficacy, fatigue and the impact of the chronic condition upon the individual's daily life. Many of the findings reported with this sample are endorsed by findings outlined in the literature.^{1, 2, 3}

Conclusion

The positive benefits to be gained from the implementation of the 'Quality of Life Programme' on the health of the individual are significant. This has been proven to lower costs to the care provider whilst providing a person-centred, empowered individual with a chronic condition.

The gains are greatly facilitated by a supporting healthcare system and proper targeting of interventions at the various populations that would benefit more; the mastery of the most up-to-date intervention techniques; and integrated community linkage.

Title of Study: A partial testing of the minority stress model among gay male college students

Authors & department(s): Chris Mc Laughlin, University of Ulster & NMPDU HSE-West
Flood John , Dublin Business School, Prentice, Garry Dublin Business School

Aims and objectives:

Minority stress and the nature of the gay community are the most frequently hypothesised risk factors accounting for increased negative behavioural and mental health outcomes among sexual minorities. Research is sparse and incomplete in regards to the relationship of these aspects to each other and to patterns of psychological distress and alcohol use among gay male college students. The central aim of this study is to examine if membership of a LGBT group acts as a cultural vulnerability in regards to alcohol use while simultaneously providing important coping resources resulting in lower levels of psychological stress. A passive, cross sectional research design was utilised in the examination of rates of internalised homonegativity, perceived discrimination, stigma consciousness and connection to the gay community in relation to binge drinking, weekly alcohol consumption and psychological stress in gay male college students (N=97).

Results:

Membership of a LGBT society acted as a risk factor for alcohol abuse but no clear statistical significance was found in relation to psychological stress. Multiple regression analysis revealed that a variety of measures of connection to the gay community, and minority stressors, were associated with increased levels of alcohol consumption, binge drinking and psychological stress.

Conclusion:

Public health programs aimed at tackling psychological stress and alcohol abuse in the student body need to address not only the prevalence of minority stressors, but also environments that may encourage alcohol abuse.

Title of study: Laparoscopic common bile duct clearance- a feasible safe option at a regional hospital

Authors & departments: Alison Havelin, Mr. Michael Sugrue. General Surgery, Letterkenny General Hospital

Aim:

Biliary Disease is one of the most common indications for surgery in Ireland. Common bile duct clearance for choledocholithiasis is an integral arm in the management of these patients. Laparoscopic common bile duct exploration is increasingly utilized world wide as a primary modality for common bile duct clearance. It has rarely been utilized in Irish Surgical Practice. This study evaluated the feasibility of common bile duct clearance in surgical practice at a Regional Hospital.

Methods:

A retrospective ethically approved study of patients undergoing laparoscopic common bile duct exploration at a 350 bed regional hospital was undertaken over a 3 year period. Patient demographics, length of stay, approached to the common bile duct and complications were recorded.

Results:

Between January 2009 and December 2011, 5 patients underwent laparoscopic common bile duct clearance; mean age 48.4 ± 15.9 , mean BMI 25.5 ± 15.5 ; 2 patients presented as an elective procedure, 3 as an emergency. A 4 port technique 3 fives and a 10 were utilized with combined 10 and 5mm 30 degree angles scoped. A Transcystic approach was used in 3 and choledochotomy in 2. Completion choledochoscopy was performed in all with insertion of T-tube in two. The mean pre-op Bilirubin was 17 ± 8.3 ; mean length of stay was $8.2 \text{ days} \pm 4.9$; mean post-op drainage $82 \text{ mls} \pm 9$; m None of the patients were re-admitted.

Conclusion:

Laparoscopic common bile duct exploration and clearance is feasible with a high success rate in selected patients. It lends itself to broader utilization in Irish Surgical circles.

Title of Study: A retrospective study of the quality of warfarin control in atrial fibrillation patients as assessed by time in therapeutic range: A comparison of hospital anticoagulation clinic and GP monitored patients

Authors & department(s): Caoimhe Haughey, B.Sc (Hons) Medical Science, Galway-Mayo Institute of Technology. Project carried out in conjunction with the Haematology laboratory of Letterkenny General Hospital under the supervision of Triona Keogh.

Aims and Objectives:

Atrial Fibrillation (AF) is one of the most common cardiac rhythmic disorders increasing the risk of ischaemic stroke by up to 5 fold.^[1] The use warfarin can reduce the risk of stroke in AF patients by 60 to 70%. However warfarin can be difficult to dose and monitor with successful management dependant on time spent within the therapeutic INR (international normalised ratio) range. In this study the time in therapeutic range (TTR) of AF patients monitored by general practitioner (GP) was compared to those monitored by the hospital anticoagulation clinic (RAID) at Letterkenny General Hospital in order to ascertain whether a significant difference in TTR existed between monitoring methods and whether patient age had a significant effect on TTR.

INR results between January 2011 and December 2011 were assessed in a total of 366 RAID monitored AF patients and 145 GP monitored AF patients. No specific age or gender restrictions were applied. Patient TTR was calculated using INR Pro reporting system software.^[2] z-tests were utilised to compare TTR proportions with a *P*-value of <0.05 considered significant.

Results:

RAID monitored patients achieved mean TTR of 70.85% while GP patients achieved mean TTR of 62.88%. Of RAID monitored patients, 71.32% managed to achieve TTRs above the benchmark of 60% while 57.93% of GP monitored patients attained this level of warfarin control.

RAID monitored patients spent significantly less time above the therapeutic range than GP monitored patients (6.91% vs. 10.81%, *P*=0.001) as well as below (13.59% vs. 17.15%, *P*=0.004), and significantly less time at extreme INRs of ≤ 1.5 (2.02% vs. 3.97%, *P*=0.006) and ≥ 4.0 (0.79% vs. 1.78%, *P*=0.000).

Age was not found to significantly affect TTR in either patient group.

Conclusion:

Although both patient groups achieved an adequate level of anticoagulant control, over the period studied, patients monitored by the RAID system achieved significantly greater control compared to patients monitored by GPs. These findings support the positive impact anticoagulation services have on the quality of warfarin therapy.

Title of Study: Delivery of Accu-Chek education program for patients with type 1 diabetes: Time well spent? A clinical audit.

Authors & department(s):Fiona Hegarty (Diabetes Specialist Dietitian), Anne Griffin (Diabetes Specialist Nurse), Anne Gavaghan (Diabetes Specialist Nurse)

Aim and Objectives:

This audit aims to evaluate if attendance at the Accu-Chek education program is beneficial in promoting self-management and improving long term glycaemic control (HbA1c) in patients with Type one diabetes.

Six group sessions where held over a 14 month period. Fifty-eight individuals with Type 1 diabetes who attend a diabetes consultant led clinic where invited to attend. The Berger program is delivered jointly by the diabetes specialist nurse and diabetes specialist dietitian.

The main focus of the group is carbohydrate counting and insulin adjustment. Patients are commenced on the Accu-Chek Expert bolus advisor meter. The group is run over 2 ½ consecutive days. Attendees completed a pre and post course knowledge questionnaire. HbA1c is measured at the start of the group and at a follow up clinic appointment 3-6 months later. Patients were invited to attend follow sessions at 4 and 8 weeks post course.

Clinical data is collected onto the Prowellness system.

Results:

- ❖ 100% of attendees showed an increase in knowledge regarding their diabetes on evaluation of their post course knowledge questionnaires.
- ❖ The group had an average decrease of 0.8% reduction in HbA1c from pre-course to clinic follow up 3-6 months later.
- ❖ The group had a 100% attendance rate , with 90% attendance at 1 month follow-up (average daily distance travelled was 66km)

Conclusions:

Delivery of the Accu-Chek Education program is time well spent.

Title of Study: Audit on the Use of IV Paracetamol in Letterkenny General Hospital

Authors & department(s): Joanne English, Pharmacy Department, Letterkenny General Hospital

Aims and Objectives:

An increase in medication errors using IV paracetamol has prompted a series of recent safety reports and alerts both in the UK and Ireland^{1,2}. A retrospective cross-sectional study was performed over a two week period using patients' drug charts and records. The sample total was 101 patients from four medical and two surgical wards that had been prescribed IV paracetamol.

This aim of the audit was to investigate if the prescription, administration and use of IV paracetamol in Letterkenny General Hospital (LGH) was in line with Irish and international guidelines and recommendations. The study findings will contribute to a collaborative audit with four other pharmacy interns from participating hospitals in Ireland.

Results:

29% of patients prescribed IV paracetamol were identified as high risk (hepatocellular insufficiency, renal impairment, weight < 50kg, chronic alcoholism). Hepatic impairment was identified as being the most common risk factor accounting for 9% of patients.

33% of post-operative patients received a dose of IV paracetamol during surgery and 92% were prescribed IV paracetamol in the regular section of their kardex. There were two cases identified where the appropriate interval between administrations of IV paracetamol was not adhered to.

No patient was administered an overdose of IV paracetamol. However, significantly, 25% of all patients were not prescribed an appropriate dose.

Conclusion:

This study has revealed that a significant risk exists for an overdose to occur in the administration of IV paracetamol. The results of the audit provide a baseline of LGH compliance with Irish and international recommendations for the safe use of IV paracetamol. It is recommended to increase awareness of reduced dosages in susceptible patients.

Title of Study: Factors contributing to margin positivity in malignant skin lesion excision specimens.

Authors & departments: Kevin Farrell NUIG , Mr.N.Couse Department of Surgery ,
Dr.G. M O'Dowd Department of Pathology , Letterkenny General Hospital

Background:

In the Irish context, general practitioners send skin excisions to general surgeons .Depending on location, and the size of centres, this may be the domain of Plastic surgery .If general surgeons do not have sufficient exposure to more complex skin excisions prior to working in a General Hospital setting, it may contribute to higher positive margin rates.

Objective:

To investigate if selected factors affected positive margin rates in an Irish General Hospital setting.

Design:

Retrospective audit.

Setting:

An Acute General Hospital.

Participants:

Skin lesions excised under local anaesthetic over a 12month period .Of these, only squamous cell carcinomas(SCC) and basal cell carcinomas(BCC) were investigated.

Results:

A retrospective review of surgical operative notes was conducted .A total of 182 skin lesions were excised .Of which 119(62.30%) were BCC and 72(37.69%) were SCC of these 38(20.87%) had positive margins .Logistic regression was performed on relevant data .It was found that certain factors, e.g consultant-level operator, contributed to higher positive margin rate, possibly due to consultants carrying out more complicated procedures .There was no statistical difference when comparing lesions excised on the head compared to body.

Conclusion:

This study's margin positivity rate of 20.87% falls just outside the range reported in the literature(0.7%-20.7%).This has much potential to be reduced .According to surgical reports only 3 procedures were supervised, regular surgical audit should be completed to provide feedback on trainee performance.

Title of Study: Re-Audit of HbA1c in Children & Young People with Type 1 Diabetes

Authors & department(s): Ms Avril McCloskey¹, Ms Aine Slevin², ¹Paediatric Dept, ²Dept of Clinical Audit

Aims & objectives

To re-examine HbA1c levels amongst the children and young people with Type 1 diabetes attending Letterkenny General Hospital and to highlight any deficiencies so that corrective action may be taken. To establish if HbA1c is within the target laid down by NICE (2004) and is measured at the recommended intervals.

Methods

Data was collected on all children and young people up to the age of 19 years with Type 1 diabetes attending Letterkenny General Hospital (n=112). Patients diagnosed within the previous 12 months were excluded. Data was collected from the diabetic system (Prowellness), the Laboratory Information System and from the Medical Record. Data was collected using a questionnaire based around determining adherence to the NICE guidelines. Data was analysed using SPSS v. 18.

Results

12/112 (10.7%) patients in the re-audit had a HbA1c of less than 7.5% (<58mmol/mol). This had increased from 5.3% in the original audit. The mean HbA1c in the re-audit was 9.2% (77.2 mmol/mol). Glycaemic control was poorest amongst teenagers.

81/112 (72.3%) children and young people in the re-audit had their HbA1c measured within the previous 3 months, a further 21/112 (18.8%) patients had their HbA1c measured within the previous 6 months.

Conclusion

12 hours per week allocated to diabetes staff nurse within paediatric service from July 2012.

Diabetes hours used to support and educate families living with type 1 diabetes where glycaemic control is above target . Diabetes outpatient clinic to be held on a weekly (instead of fortnightly) basis so that those with poorer glycaemic control may be reviewed by diabetes team more frequently in order to provide them with extra support

CAWT funded diabetes programme ongoing since May 2011

Need for Insulin Pump Service locally

Title of Study: Clinical Audit on Opioid Prescribing in Letterkenny General Hospital

Authors and department(s): Annalisa Mullan, Carmel O'Donnell, Stanley Nwabudike, Aine Slevin. Dept of Pharmacy, Dept of Palliative Care, Dept of Oncology, Dept of Clinical Audit, Letterkenny General Hospital.

Aim and Objectives:

To ascertain if the prescribing of the strong opioids, morphine, oxycodone and hydromorphone, in Letterkenny General Hospital is in accordance with pain management guidelines (WHO Guidelines 1986; SIGN Guidelines 2008; GAIN Guidelines 2011; EAPC Guidelines 2011).

These guidelines state:

- Morphine is the strong opioid of choice for moderate to severe pain.
- Patients on regular strong opioids should have access to breakthrough analgesia (sixth of total daily dose 4 hourly)
- Weak opioids e.g. codeine, should not be prescribed with strong opioids.
- Laxatives should be prescribed with strong opioids; preferably a combination of a stimulant laxative and a softener.
- Patients should have access to antiemetics for at least 7 days after initiating a strong opioid.

Methodology:

A prospective audit was carried out on the inpatient wards over a two day period in February 2012 with the exception of Paediatrics, Maternity, ICU and post op patients (n=16).

Results:

- 9 (56%) were prescribed oxycodone, 7(44%) were prescribed morphine, 0(0%) patients were prescribed hydromorphone.
- 4/16(25%) patients had no breakthrough analgesia prescribed.
- 4/16(25%) of patients on regular strong opioids were also prescribed a weak opioid.
- 4/16(25%) patients had no access to anti-emetics.
- Laxatives were contraindicated in 4/16(25%) patients.
- 4/12(33.3%) patients on strong opioids in whom laxatives were not contraindicated were on a regular softener and stimulant laxative.
- 1/12(8%) patient had no laxatives prescribed.

Conclusion:

The findings suggest that improvement, guidance and education on the prescribing of strong opioids at Letterkenny General Hospital are required. This can be achieved through education to NCHDs during induction sessions, a Palliative Care Study Day and development and distribution of a patient information leaflet on opioids. National Pain Guidelines, which are currently under development, will provide further guidance for prescribers. A re-audit will be carried out six months post the launch of these guidelines

Title of Study : Antithrombotic therapy and associated adverse events are common in emergency surgical admissions

Authors & department(s): Alan Sugrue, Michael Sugrue, Department of Surgery, Letterkenny Hospital, Donegal

Introduction:

Antiplatelet therapy is increasing in use but its effect in general surgery patients has not been published.

Aim:

This study assessed the prevalence and adverse events of antiplatelet and anticoagulation on emergency general surgical admissions.

Methods:

A eight week ethically approved prospective study of all consecutive surgical admissions to Letterkenny Hospital was undertaken from April 2011. Demographics, medications and diagnosis on admission were noted; Bleeding events within 24 hours and management were noted.

Results:

417 acute surgical admissions, mean age 47.7 ± 25.6 years (range 1-97). 136/417 (32.6%) presented with lower GI symptoms, 17% with Upper GI, 16.8% with Urologic emergencies, 15.8% trauma, and 15.8% others. 83/417 (19.9%) was on antiplatelet, anti coagulation or both. 68/83(81.9%) were on antiplatelet agents, 9/83(10.8%) on anticoagulants and 6/83(7.2%) both. Administration of 18/83 on these agents did not fit with current international guidelines. 20/83 (24%) patients on antithrombotic agents that had adverse events contributing to their acute surgical admission. As shown in Table below.

6 patients in this study had an INR>3 with 4/6 having adverse events as a result of anticoagulation.

Conclusion:

This study identified significant use of antithrombotic drugs in patients presenting as surgical emergencies, with associated bleeding events in 24%. Awareness of the frequency of and management of side effect is essential in modern day surgical practice.