15th Annual Research Conference
November 28, 2014
Research & Education Centre
Sligo Regional Hospital

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**OverCrowded ED, The effects of boarders on waiting times in the ED**

Dr Stephen Gilmartin, Dr Eoin Kelly Emergency Department Sligo Regional Hospital

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**Introduction**

The Majority of cost saving measures in the Irish healthcare system come from altering hospital infrastructure and policies. This has led to ongoing closure of acute hospital beds despite the ever increasing attendances in Emergency Departments. We predict that this will lead to increasing occupancy of emergency departments beds by inpatients and subsequent increase in waiting times.

**Aims & objectives**

We have undertaken a study to look at the effect of trolley occupation by boarders on waiting times in the Emergency Department of Sligo Regional Hospital

**Methodology**

A retrospective review of electronic and chart recorded attendance and assessment times was performed to calculate patient waiting times in the emergency department on four selected days with similar attendance numbers. Two days selected had an average trolley occupancy throughout the day of 1 with the remaining two having an average of 8.66. Trolley occupancy is based on recorded figures of morning, afternoon and evening trolley numbers occupied by patients awaiting inpatient beds. The data was collated and analysed for statistical significance using the students t-test. Subsets of data were used to assess effect of overcrowding on waiting times for chest pain and paediatric presentations

**Results**

Of the 200 charts reviewed on blocked days 167 had time seen recorded. 205 patients were reviewed on the non blocked days with 189 having time seen recorded. The average waiting time on a blocked day was 175 minutes while non blocked days was 119 minutes. p value calculated was <0.001.

Regarding the subsets analysed, the difference in average waiting times for chest pain between blocked(184 mins, n=18) and non blocked days(61mins, n=13) was also found to be significant with a p value of <0.021. The average waiting times for paediatric attendances was found to be 156 minutes on blocked day(n=32) and 81mins on non blocked days with a p value of <0.001 (n=38)

**Conclusion**

Emergency Department overcrowding is an increasing issue in Irish healthcare. When Doctors have no space to see a patient waiting times are seen to increase. This represents a real and quantifiable risk for patients in overcrowded departments nationwide.
General Practitioner Contribution to Out-of-Hospital Cardiac Arrest Outcome: a National Registry Study

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Prof. Andrew W Murphy, Foundation Professor. Discipline of General Practice NUIG.

Introduction
There is wide variation in reported survival from out-of-hospital cardiac arrest (OHCA)\(^1,2\). One factor in this variation may be the contribution of general practitioners to pre-hospital resuscitation. Studies using self-reported data have described impressive survival rates when general practitioners (GPs) are involved\(^3-5\).

Aims & objectives
This study aims to investigate the contribution of general practitioner involvement in out-of-hospital cardiac arrest events.

Methodology
This is a retrospective observational study using data collected from ambulance records in the Republic of Ireland to describe GP contribution to pre-hospital resuscitation attempts (n=2369). Analysis is limited to patients with presumed cardiac cause and first arrest rhythm recorded as shockable (n=510). Patient demographics of both the GP present and not present groups were compared using t-test for continuous variables and chi-square for categorical variables. The same tests were then used to compare the GP participation and no GP participation groups. Outcomes for logistic regression analysis were death or survival-to-discharge.

Results
When a GP is present at scene (n=199) patients are less likely to achieve return of spontaneous circulation (ROSC) (p<0.001) or be transported to hospital (p<0.001). When GPs participate in resuscitation (n=92), patients are more likely to have collapsed in a public place (p<0.01), receive bystander CPR (p<0.001) and survive to hospital discharge (p<0.001). Multiple logistic analysis of survival suggests that GP participation in resuscitation increases the odds of survival (4.6 [95% CI 1.6-13.3]) and having collapsed in a public place also increases chances of survival (5.8 [95% CI 2.1-15.7]).

Conclusion
Our analysis suggests that in this subgroup, GP participation in OHCA resuscitation attempts is associated with improved patient survival. Our analysis also suggests that resuscitation is more likely to be ceased at scene when a GP is present, highlighting the role that GPs play in the compassionate management of death in unwaviable circumstances.

References
ICH GCP and Clinical Trials in Oncology Clinical Trials in SRH;  
A Patients Perspective

Margaret Burke, Research Nurse, Dept of Oncology, Sligo Regional Hospital

Introduction
Great strides have been made in clinical research to safeguard human subjects and ensure scientific integrity through discussion regarding ethical principles underlying clinical research, government regulations, and research staff training worldwide.

Aims & objectives
To ensure ICH GCP standards are being followed from a patient perspective  
To explore a standard of care in the satisfaction of the service received as part of clinical trails in Sligo Regional Hospital

Methodology
Oncology and Haematology patients that enrolled on research studies were audited as part of a clinical audit entitled 'Patient Satisfaction and Experience of Haematology and Oncology Research in Sligo Regional Hospital'. Confidential questionnaires were developed, piloted and were posted to potential respondents. Date extracted from the 36 clinical trial participants, was analysed for service satisfaction and the patient perspective of ICH GCP.

Results
The purpose of studies were explained to the satisfaction of participants (94.4%), including potential risks (94.4%) 100% were afforded the opportunity to ask questions before signing consent, with 92.6% felt that there was someone with whom to discuss participation in the study. Nursing staff were found to be respectful, professional and knowledgeable. 91.6% of patients felt that they benefited from participation. Only 2.7% would not recommend participating in a clinical trial to others.

Conclusion
Current practices implemented in Sligo Regional Hospital are in accordance with National and International best practice guidelines and regulations. This has consistently been reported as part of external regulatory ICH GCP(1996) audit, sponsor study monitoring and international procedural audit of studies open within the service. However our perception, as professionals, of the service we provide may differ from the perception of the service user.

Reference
Clinical Reaudit on paediatric day ward activity.

Bernie Clancy (CNM2), Dr. Hilary Greaney (Consultant Paediatrician).

Sligo Regional Hospital

Introduction
The paediatric ward operates a day ward facility within its in-patient unit. The day ward activity is resourced and managed on a daily basis by the in-patient staff (both medical and nursing). There are no strict criteria for its case load and no extra resources to meet the growing demand for day cases.

Aims & objectives
The aim of this study was to look at the day ward activity within the Paediatric Ward including age profile of children, consultant usage of service and procedures performed. The aim of the study is to ascertain the appropriateness of the day cases currently attending and provide activity figures for future service planning and workforce planning. The only children attending directly to the paeds day ward should include:
- Children with free admission
- Children with haematology/oncology conditions
- Children requiring invasive radiological procedures (DMAS/MRI/MCUG/MAG3/CT)
- Children < 7 years of age requiring blood sampling.
- Children with complex medical needs
- Children with factor 8 deficiency requiring prophylaxis/replacement therapy.

Methodology
This quantitative study was carried out retrospectively. Data was collected from the manually recorded records of attendees for the first four month of 2014. The sample size was 497 children. Data was collected by the CNM2 on the paediatric ward using a performa designed to capture the relevant data. Completed data was analysed and a report generated by the Clinical Audit support team.

Results
34% of children attending the paediatric ward have free admission.
14% are children with oncology diagnosis. 33% of attendees attended for blood sampling. 8% required radiological procedures. 12% of attendees were for administration of a product for a haematological disorder. 23% of children were recorded to have a review however this was probably higher but not recorded. Procedures such as blood pressure monitoring, urine sampling, blood sugar monitoring, weight checks and vaccination administration accounted for 20% of attendees.

Conclusion
Strict criteria need to be drawn up regarding what are appropriate procedures for paediatric day ward. On discharge clear clinical decisions as to whether a child needs follow up is required either as day case, outpatient or GP. GP's and PHN’s need to be utilised more to follow up and monitor patients in the community. There is sufficient evidence to support the need for a standalone, appropriately resourced day ward for paediatric s in SRH.
Reaudit on use of antipyretics for febrile children <5 years in the Paediatric Ward 2014

Bernie Clancy (CNM2), Claire Maye (S/N), Dr. Marquerite Lawlor (SHO), Dr. Hilary Greaney (Consultant Paediatrician).

Paediatric Dept, Sligo Regional Hospital

Introduction

In 2013 the paediatric ward audited its then practices for management of pyrexia in children < 5 years of age. Results showed that children who were asymptomatic received antipyretics. Education of best practice was implemented and this reaudit is to assess whether practices have improved.

Aims & objectives

The aim of this study was to look at the practice within the Paediatric Ward of using antipyretics for children <5 years of age. The objectives of the study were (1) to ensure proper use of antipyretics for febrile children <5 years of age and (2) to assess whether the correct type and dose of antipyretics are used for children <5 years of age. Five standards were used to measure against based on the NICE clinical guidelines and NSW guidelines.

Methodology

This quantitative study was carried out retrospectively. Data was collected from the charts of all children <5 years of age who were admitted with fever to the Paediatric Ward during the months of Jan –March 2014. The sample size was 29 children. Data was collected by 2 members of nursing staff (one CNM and one staff nurse) and one SHO using a performa designed to capture the relevant data. Completed data was analysed and a report generated by the Clinical Audit support team.

Results

82% had a recorded pyrexia of 38 degrees or above. 17.2% received antipyretics for fever only, 65.5% received antipyretics for a fever and being distressed or unwell. All children received either paracetamol or ibuprofen. 69% responded to the first antipyretic given, 17% received an alternative antipyretic. 7% received both at the same time. 45% received 15mgs/kg of paracetamol and 31% received 5-10mgs od ibuprofen. Other doses were rounded off to allow suppositories to be administered of doses rounded down for weight which were considered underdosing. No child received more than the recognised dose as per the BNF medicines for children 2014.

Conclusion

Overall there was a 10% improvement in practices for managing pyrexia in children < 5 years of age in the Paediatric Ward. However, further education is needed around the management of pyrexia in children < 5 years of age.

References

NICE Clinical Guidelines 47 on feverish illness in children: Assessment and initial management in children younger than 5 years.

Anthropometric characteristics of elite Gaelic football players and their relationship to injury occurrence

Carmel Silke1, James Clarke2, Bernie McGowan1, Claire Smyth3, Therese Devaney3, Aoife McPartland1, Padraig McGourty4, Micheal Newell2, Bryan Whelan1, 2,

The North Western Rheumatology Unit, Our Lady’s Hospital, Manorhamilton, Co Leitrim
Dept of Medicine, Nursing and Health Sciences, NUIG.
Sligo Senior Gaelic Management Team.
Dept of Life Sciences, Sligo IT

Introduction
Gaelic football is increasing in its professionalism despite its amateur status. Small margins can separate winning from losing and any possible advantage in preparation is being employed by management teams. Therefore it is beneficial to know the optimum physical characteristics that players should have in order to compete to optimum levels while avoiding injury.

Objectives
To investigate the a) anthropometric characteristics of an inter-county football team in pre-season and mid-season and b) to determine if players’ anthropometric changes throughout the season have any relationship with injury occurrence.

Methods
In total 21 inter-county footballers had their total Body Composition (bone, muscle and fat mass) measurements taken at preseason (Pre-Christmas period) and mid-season (pre-championship season) using dual-energy x-ray absorptiometry (DXA scan) along with their height and weight. Injury data on the players was collected twice weekly and recorded by the team physiotherapists throughout the study period.

Results
Mean age of the players was 25.1 (4.0). Defender’s Fat Mass (p=0.033) and Tissue Percentage Fat (P=0.023) decreased significantly compared to forwards between pre-season and mid-season. Players who sustained an injury on landing (p=0.041) were taller (by 18.1cm) compared to players with contact injuries. As Percentage Lean Mass increased, the Percentage Fat Mass (p=0.003 & r=0.615) and Tissue Percentage Fat Percent (p=0.000 & r=0.697) decreased. The results of the pre-Christmas DXAs identified that at pre-season, only 19.0% of the players were classified as having ideal Body Fat Percentage for athletes, a further 9.5% were classified as having acceptable body fat percentage, while 71.4% were classified as above recommended values. By mid-season 85.1% of players had decreased their fat mass with 23.8% being ideal, 19.0% acceptable & 57.1% above recommended values. On further analyses it was identified that players suffering from chronic injuries had a higher fat mass and tissue percent fat and lower lean mass compared to those suffering acute and overuse injuries. Players who were injury free had a higher lean mass in pre-season than those with injuries. Furthermore it was identified that there was a correlation between reduction in lean mass and number of injuries between pre-season and mid-season.

Conclusion
Although trends were seen between different aspects of body composition and its relationship to injury, in order to have greater statistical power further studies require a larger cohort to be followed over a longer period of time.
A pre-season and mid-season comparison of Dietary Intake and Body Composition assessment in Inter-county Gaelic Footballers

Dan Simpson1, Bernie McGowan2, Carmel Silke2, Brendan Egan3, Gemma Faulkner1, Aoife McPartland2, Padraig McGourty1, Bryan Whelan2,

Dept of Life Sciences, Sligo IT; The North Western Rheumatology Unit, Our Lady's Hospital, Manorhamilton, Co Leitrim; School of Public Health, Physiotherapy & Population Science, UCD

Background
Nutritional assessment and analysis of seasonal anthropometric changes in Gaelic players may identify relationships between diet and maintenance of a body composition conducive to the requirements of a long and physically demanding playing season [1-7].

Objectives
The objectives of the study were to identify 1) changes in anthropometric characteristics of senior inter county Gaelic players from pre-season to mid-season 2) changes in nutritional intake from pre-season to mid-season 3) if the nutritional intake of Gaelic players is in line with nutrient recommendations (3) 4) if there is a correlation between nutrient intake and body composition.

Methods
A total of 27 players on an Inter-County Gaelic Football panel were included in the study during the 2013-2014 playing season. The validated EPIC Norfolk Food Frequency Questionnaire was used to record estimated dietary intake for a 12 month period prior to their first DXA scan (4) and dietary analysis was repeated at the mid-season stage following dietary intervention. The players attended the NWRU in December 2013 (pre-season) and May 2013 (mid-season) for body composition analysis using dual-energy X-ray absorptiometry (DXA). The player’s mid-season body composition and nutritional intake were compared to pre-season results and other similar type studies (6, 7). Statistical analysis was performed using IBM SPSS Statistics for Windows, Version 20.0 and Microsoft Excel 2010. Results were considered statistically significant at p<0.05.

Results
The mean age was 24.85 years (SD +4.07). Significant decrease in mean % body fat mass was observed (pre-season=16.46%, + SD 4.85%; mid-season=15.46%, + SD 5.31, P=0.001) and an increase in WB lean mass was observed (pre-season=66.96kg, + SD 5.77kg; mid-season=67.63kg, + SD 5.8 P=0.1). Following dietary intervention, at the mid-season point, the group had maintained recommended nutrient intake for Energy, Protein, and Carbohydrate. There were no statistically significant correlations identified between age, total energy intake, and % fat energy intake and % body fat mass.

Conclusion
A significant decrease in fat mass and an increase in lean mass were observed. These anthropometric changes may be attributed to a combination of increase in calorie expenditure/training volume, and dietary intervention between pre-season and mid-season analysis.

References:
Adherence and persistence to Urate-Lowering Therapies in the Irish Setting

Bernie McGowan1 Kath Bennett2 Carmel Silke1 Bryan Whelan1,2

North Western Rheumatology Unit, Our Lady’s Hospital Manorhamilton, Co Leitrim.
Department of Medicine, National University of Ireland, Galway.
The Department of Pharmacology and Therapeutics, Trinity Centre for Health Sciences, St. James’s Hospital, Dublin 8.

Introduction
Studies to date have identified that adherence to urate lowering therapies for the management of gout is amongst the worst of all chronic rheumatic therapies [1]. The reasons for this are complex but they include the risk of flare of acute gout with the initiation of urate lowering therapy (ULT), poor response to ULT and persistence of attacks of acute gout with the initiation of ULT, suboptimal dosing of Allopurinol therapy and intolerance to Allopurinol [2].

Objective
To identify adherence and persistence levels with Urate Lowering Therapies using the national administrative pharmacy claims database

Methods
This was a retrospective, pharmacy claims-based analysis of dispensed anti-gout medications on the Irish national HSE-PCRS scheme database between January 2008 and December 2012. Adherence is defined by the medication possession ratio (MPR) and patients were considered to be adherent if the MPR ≥ 80% (good adherers) in any given time period. Persistence was defined as continued use of therapy with no periods exceeding a refill gap of > 63 days (9 weeks). Logistic regression analysis was used to predict odds ratios (OR) and 95% CI for persistence and adherence in relation to age, gender and level of comorbidity.

Results
There was a 53% increase in the number of patients prescribed anti-gout medications between 2008 and 2012 with an increase of 27% in the associated ingredient cost of these medications. Allopurinol accounted for 87% of the prescribing and febuxostat accounted for a further 9%. In patients who started on 100mg allopurinol only 14.6% were titrated to the 300mg dose. For all those initiating urate lowering therapies 45.8% of patients were persistent with treatment at 6 months decreasing to 22.6% at 12 months. In multivariate analysis, females had poorer adherence (OR=0.83 (0.77- 0.90)) and increasing age was associated with increased adherence (OR=4.19 (2.53-6.15)) Increasing comorbidity score was associated with reduced adherence and persistence at 6 months (OR = 0.68 (0.59 – 0.79)).

Conclusion
Adherence with anti-gout medications in this study cohort was relatively low. Sustained treatment for gouty arthritis is essential in the prevention of serious adverse outcomes.

References
Potential under treatment of patients with gout in the Irish setting: analysis of data from a linked database of laboratory and pharmacy claims data

Deepti Ranganathan1, Bernie McGowan1, Kath Bennett3, Carmel Silke1, Bryan Whelan1,2

North Western Rheumatology Unit, Our Lady’s Hospital Manorhamilton, Co Leitrim.
Department of Medicine, National University of Ireland, Galway.
The Department of Pharmacology and Therapeutics, Trinity Centre for Health Sciences, St. James’s Hospital, Dublin 8.

Introduction
Urate Lowering Therapy has been shown to have great efficacy in reducing Serum Uric Acid (SUA) levels in patients with gout, with evidence stating significant dose-response relation with a reduction of 1mg/dL of SUA for every 100mg increment of allopurinol. International guidelines suggest a ‘treat to target serum urate’ approach to be employed however, adherence to ULT remains consistently low amongst other chronic conditions.

Objectives:
To identify if patients with increased SUA levels have repeat SUA levels taken to identify response to treatment as recommended by EULAR, NICE and the ACR guidelines.
To identify adherence and persistence to treatment at 12 months post initiation of therapy

Methodology:
This was a retrospective study involving a combined data set of the Health Services Executive Primary Care Reimbursement Service (HSE-PCRS) database, Sligo Regional Hospital (SRH) and Letterkenny General Hospital (LGH) laboratory databases between January 2008 and December 2012. The datasets were linked using the patients HSE-PCRS number as the unique identifier. All patients in the study were followed through for a period of 12 months post initiation of therapy.

Results
In total 620 (7%) of the HSE-PCRS patients had received any urate-lowering therapy between January 2008 and December 2012. Only 264 of the patients had 1-year follow-up of ULT. Of the 264 patients, 44.3% were persistent with therapy at 12 months and 43.02% were compliant (≥ 80% medication possession ratio). Of the 105 patients with repeat SUA level after baseline, the uric acid levels were further categorized as <6mg/dl, 6-8.99mg/dl and ≥ 9mg/dl. At 12 months follow-up there were 63.8%, 23.8% and 12.4% in each of these categories respectively. 10/105 (9.5%) improved their category over time (i.e. went from higher to lower category level).

Conclusion
The results of our study have shown that only 39% of patients who were commenced on ULT during the study period had a repeat SUA level measured. This does not meet with the current guidelines, which suggest repeat SUA levels every 2-5 weeks till titration of ULT achieves target SUA and for continued SUA level measurements every 6 months once targets have been achieved.
An Audit Of Cardiovascular Risk Assessment In Systemic Lupus Erythematosus (SLE), Sjogren’s Syndrome (SS) And Myositis Patients At The North Western Rheumatology Unit

Orla Banks, B. McGowan, B. Whelan, C. Silke

Department(s)/Institution(s): Northwestern Rheumatology Unit, Our Lady’s hospital, Manorhamilton, Co. Leitrim. NUI, Galway.

Introduction:
Cardiovascular disease is a well-recognized complication of Systemic Lupus Erythematosus (Schoenfeld et al., 2013). Studies have shown that patients with primary Sjogren’s Syndrome and Myositis also have a greater cardiovascular risk than the general population (Linos et al., 2013)(Perez-De-Lis et al., 2010). Systematic screening for and treatment of cardiovascular risk factors may be beneficial in reducing cardiovascular mortality (Linos et al., 2013).

Aims/Background:
To identify if patients with a diagnosis of Systemic Lupus Erythematus (SLE), Sjogrens Syndrome(SS) and Myositis are routinely assessed during out-patient appointments for the presence of cardiovascular risk factors.

Method:
All patients diagnosed as having SLE, SS and Myositis were identified by Rheumatology consultants. 65 patients were identified, 45 of these patients had been reviewed in clinic within the previous 12 months. A data collection tool was developed using Microsoft Excel, with eleven criteria identified using EULAR evidence based recommendations for cardiovascular risk factors in patients with inflammatory arthritis (Peters et al., 2010) ; smoking status, physical activity, weight, Body Mass Index(BMI), blood pressure, oral contraceptive or hormone replacement therapy, family history, blood glucose and cholesterol levels.Data was obtained retrospectively from solely written patient health records over previous 12 months. Data was analysed using Microsoft Excel.

Results:
Good practice was found with 91.1% of patients having their weight and 88.9% of patients having their blood pressure documented annually. However, no patient had a cardiovascular score documented. Only 11.1% of patients had their BMI and physical activity recorded.

Conclusions:
A total cardiovascular risk assessment document should be included in each patients chart incorporating these risk factors to be completed annually in all these patients.

References:
Perez-De-Lis et al. (2010) Cardiovascular risk factors in primary Sjogren’s syndrome: a case-control study in 624 patients.
Discharge Documentation– Is it safe, comprehensive and timely?

Dr Alexandra Murphy, Dr Donal Murray. September 2014.
Cardiology Department, Sligo General Hospital, Sligo, Ireland.

Introduction
The discharge document is an important record to provide the General Practitioner (GP) with useful information regarding their patient’s stay in hospital. Good discharge documentation will prevent hospital readmission, adverse medical events, and even mortality.

The Health Information and Quality Authority (HIQA) have recently released a guideline on discharge documentation: “The National Standard for Patient Discharge Summary Information”.

Aims & objectives
The aim of this audit was to assess delays in, and the completeness of, discharge summaries.

Methodology
Data from both IPMS and HIPE was analysed to provide information on patient discharges for the week 14/07/14 to 18/07/14. Discharge summaries were then accessed on IPMS. The data was collected based on whether information was input into the correct data box on the discharge summary.

Results
There were 105 patients discharged from inpatient care in Sligo General Hospital in the period studied. Four patients were excluded from the analysis. This gave a total of 101 discharge summaries to examine.

Overall, 85.1% of discharge letters were done at two months. The range of days to complete a discharge letter was 0-18, with the mode and median being 0, with a mean of 1.2 days.

There is good input of data (over 94%) for certain details: consultant, ward, dates of admission/discharge, and primary diagnosis. However, there is poor documentation of medication stopped (44.2%) and follow up plans (79.1%).

Conclusion
There are various insufficiencies in discharge documentation; these include: absent discharge documentation, incomplete information, and medicine non-reconciliation.

Potential strategies to improve on the above issues would be: An electronic system to prompt completion of discharge summaries, a format that would prevent progression until relevant fields are completed, and pharmacists to assist in medication reconciliation on discharge to reduce the chance of human error.

References


Introduction
Diagnosing a second primary cancer with lymphadenopathy in patient with pre-existing first cancer diagnosis poses a challenge as lymphadenopathy is a common sign for both diseases.

Case Report
A case of a neck soft tissue sarcoma was diagnosed in a patient who has previously been diagnosed with chronic lymphocytic leukaemia is reported. A 54 year old diagnosed CLL male patient few months after his diagnosis reported enlarged glands and constitutional symptoms such as loss of energy and fatigue. CT of neck, thorax, abdomen and pelvis (contrast) to assess disease stage showed multiple mildly enlarged lymph nodes along the right and left anterior posterior cervical chains. On an ENT examination a rapidly growing 6cm mass on the right anterior cervical triangle was noted, however patient denied mass causing any pain, dysphagia, dyspnoea or dysphonia, cellulitis or fluctuancy. Flexible nasendoscopy showed lymphoid hyperplasia within ring of waldeyer. A core biopsy of the mass however revealed a high grade soft tissue sarcoma with focal myofibrolastic differentiation. Patient was referred for a Head and Neck assessment in a hospital that is equipped to do a head and neck MDM assessment. MDM conclusion was that the mass was a soft tissue sarcoma, not CLL. Patient had complete surgical resection of the mass with plastic surgical input. Patient is doing well.

Discussion
This case illustrates importance of complete ENT examination, Head and neck assessment and investigations including, FNA/core biopsy of any new mass felt even in pre-existing cancer diagnosis. Histology for biopsy and a multidisciplinary assessment are vital for suspicious new masses even in already diagnosed cancer patients. This will alleviate issues of missed diagnosis and delay of treatment for a second cancer diagnosis.
Introduction
Effective audit is an essential component of assessing, monitoring and maintaining the efficiency and quality of patient care in day surgery units (DSU). We carried out a short snapshot audit to assess adequacy of post-operative analgesia in paediatric patients post surgery in our DSU.

Aims and Objectives
Adequate analgesia post-operatively is paramount and should be effective and long-acting. We carried out this audit to discover how our post operative care compared to standards set by the Royal College of Anaesthetists UK1.

Postoperative Standards Set:
1. <5% of patients reporting severe pain on any day.
2. >75% of patients reporting no pain after 72hrs.
3. >75% of patients rating their satisfaction with pain management >7/10.

Methods
After Hospital Audit Committee approval, all paediatric DSU patients who underwent a day surgical procedure, aged up to 12 years old, were included in the audit. Peri-operative analgesia assessment was recorded using a Visual Analogue Scale (VAS) (0=no pain, 10=worst pain imaginable) such as the Wong-Baker FACES Pain Rating Scale. In addition, the children and their parents were requested to estimate, on a scale of 1-10 (0=poor, 10=excellent) their satisfaction with post-operative pain management.

Results
In 4 weeks, 34 paediatric patients had presented for surgery in the DSU. 65% of patients had no pain at home, and 91% of patients had no pain by 72hours post-surgery. After 24hrs, 3 patients in total said that their pain had affected their daily routine such as eating or sleeping (none after 72 hrs). PONV score was 0/10 for all patients.
100% of patients rated the overall satisfaction of their pain management > 7/10 with 73% of patients rating it 10/10.

Conclusion: In this one-month snapshot audit, analgesia for day surgery has been demonstrated to be effective in the DSU, Sligo Regional Hospital. The audit will now be conducted over a 6 month period and will include all paediatric day surgery cases.

References:
Cost effectiveness of routine pathologic examination on specimens taken from hip arthroplasties – A retrospective cohort study

Dr. Jonathan Ng (department of medicine); Mr. Ashok Ramasamy (department of orthopaedics)
Dr. Clive Kilgannon (department of pathology); Mr. Satish Kutty (department of orthopaedics)

Sligo Regional Hospital

Introduction
Routine pathologic examination is often performed on all surgical specimens. However, in an era where optimisation of resources has become necessary practice, a clinical audit has been conducted to determine whether routine pathologic examination of hip arthroplasties alters patient management and whether it is cost-effective.

Aims & objectives
The objective of this review is to determine the necessity of routine pathologic examination at this institution. A three-step approach was used1.
1. Determine rate of discordant and discrepant diagnosis
2. Estimate the cost of routine pathologic examination
3. Calculate the cost effectiveness of routine pathologic examination in terms of QALYs gained

Methodology
We conducted a retrospective review of 299 consecutive cases (288 patients) of hip arthroplasties performed for a variety of indications during January 2011 to August 2014 to assess for the cost effectiveness of routine pathological examination. Preoperative diagnosis was compared with pathological diagnosis. The results were considered concordant if they agreed; discrepant if they differed with no change in patient’s management and discordant if they disagreed with a change in the resultant management. Cost identification was estimated by calculating the average cost of routine pathologic examination in hospitals across Ireland and this was reported in euros.

Results
In 291 cases, 272 (93.5%) preoperative and pathological diagnosis were concordant [95% confidence interval of 90.7 to 96.3%], 19 (6.5%) were discrepant [95% confidence interval of 3.7 to 9.3%] and none were discordant. Total cost of routine pathologic examination was €14,600, or €50 per specimen. None of the routine pathological examination led to direct alteration in management and therefore no QALY was gained as a direct result of this practice.

Conclusion
Our audit questions the necessity of performing routine pathologic examination of uncomplicated hip arthroplasties. In the last three years, €14,600 has been spent on routine pathology of femoral heads and there has been no QALY gained, which makes this practice not cost effective.

References
The Establishment of a Reference Interval for Sweat Testing in a Healthy Adult Population

Martina Egan Galway-Mayo Institute of Technology, Dublin Rd, Galway
Geraldine Conneely and Noreen Montgomery
Dept. of Clinical Biochemistry, Sligo Regional Hospital, The Mall, Sligo

Introduction
Cystic Fibrosis (CF) is a genetic metabolic disease that affects the lungs, gastrointestinal system, the pancreas and more. Ireland has the highest incidence of CF in the world; approximately 3 in 10,000 people are born with the condition, and 1 in 19 people are carriers of a mutation in the Cystic Fibrosis transmembrane conductance regulator (CFTR) gene [1]. Mutations in the CFTR gene may result in a mild phenotype that may not be detected until adulthood [2]. The sweat test is a useful laboratory procedure that supports the diagnosis of CF.

Aims and Objectives
The aim of this study was to establish a reference range for the measurement of sweat conductivity in adults, as the current reference range is not specific for adults. Wescor® found that as people age, the variance between a normal and abnormal sweat conductivity result becomes more difficult to define [3].

Methodology
The sweat test was performed on 56 adults (40 females and 16 males) using the Webster sweat Inducer, Macroduct sweat collection system and the Wescor Sweat Chek sweat conductivity analyser. Results: 10 individuals were found to produce sweat conductivity results that fell into or above what is currently defined as the intermediate range of 60-80mmol/l. The new reference range was established by calculating +/- 2 standard deviations of the mean, producing a range of 18mmol/l - 78mmol/l. Comparing genders, it was found that there is a significant difference between males and females (p-value= 0.012).

Conclusion
The range established here eliminates the confusion of an intermediate range. The significant difference between males and females may warrant the establishment of gender specific reference ranges. However, as the sample population was relatively small, further study with a much larger sample size is required to confirm these findings. (290 words)


Title;
Mapping for improvement the pre-admission process of the surgical patient in sligo regional hospital

Alison Smith Programme Leader TPOT, Rosaleen White CNM2 PAC
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Introduction
On average, 55 adult elective surgery patients present for Day of Surgery Admission (DOSA) weekly in SRH. In line with the Model of Care for Elective Surgery1 all patients should undergo out patient pre-assessment. In 2013, 56% of these scheduled patients were seen in the Pre Admission Clinic (PAC). The demand for the PAC service exceeds throughput resulting in longer waiting time for PAC appointments and surgery.

The national elective surgery waiting list target is 8 months. The Key Performance Indicator is that 75% of elective surgery patients should be DOSA. In order to move towards these targets and improve the overall patient experience, a review of the PAC process was commissioned.

Aims and objectives
To increase the proportion of elective surgery patients weekly seen by PAC to 100%

Methodology
Using Lean Six Sigma tools Define, Measure, Analyse, Improve and Control, an analysis of the clinic was undertaken. A Brainstorming event generated an affinity diagram with suggestions displayed in an Ishikawa diagram, prioritised and measured using histograms, run, pie and pareto charts.

Results
Process Changes:
Introduction of a pilot Nurse Led Assessment Clinic (NLA) in June 2014 and full roll out of NLA in September 2014
Review of telephone assessment (TA) guidelines
Introduction of Web Text reminder service
Referral Card Revised
• Additional clinic room secured
• Drafting Patient information booklet commenced
• Office revamped applying 5s principle.

Process improvement results:
The proportion of elective surgery patients weekly seen by PAC is now 100%
The number of patients seen by PAC in June 2014 is 30% greater than in June 2013
The number of DNA and late cancellations to PAC has reduced by 75%

Conclusions
Using quality tools and inclusion of key stakeholders resulted in significant improvements in the efficiency of the PAC service. Active participation and good team work was evident throughout the process. Good communication and tenacity were key attributes to the overall success of the project.

References
Exploring staff nurses’ perceptions of conflict at the point of care in a rural acute Health care setting

Nuala Ginnelly, Nursing Administration, SRH

Introduction
Unresolved conflict is very costly at the point of care with established links to medication errors, patient deaths, decreased work satisfaction, high turnover and absenteeism, lower efficiency and increased patient litigation costs.1-3. This study was undertaken to ascertain a better understanding of the conflict as perceived by staff nurses.

Aims & objectives
The aim of this study was to explore the experienced and perceived causes of conflict for staff nurses at the point of care in a rural acute health care setting. The key objectives were to identify/examine a) the sources/causes of conflict; b) the effect conflict has on the staff nurse; c) the perceived benefit of conflict; d) the conflict style adapted by staff nurses; e) the supports used currently/requested to deal with conflict into the future; f) the relationship between source of conflict and conflict style; g) if age, length of time working, post registration qualifications, training in conflict management influences staff nurses’ perceptions of conflict.

Methodology
Design: A quantitative cross-sectional descriptive survey using statistical analysis.
Method: A Researcher-developed questionnaire was used for the target population of staff nurses working at the point of care to participate namely through the employment of non-probability census sampling. 220 questionnaires were issued with 171 returned completed. Response rate was 77%.

Results
The greatest perceived and experienced cause of conflict for staff nurses at the point of care is nurse to doctor conflict followed by nurse to patients’ family conflict. The impact on job satisfaction was overwhelmingly the greatest consequence of conflict for the staff nurses. Compromise and collaboration was the most frequently adapted conflict management style used by staff nurses when dealing with conflict at the point of care.

Conclusion
While reduced resources is a significant factor in creating conflict at the point of care, successful conflict resolution techniques can be learned that can lead to a positive change in practice and new ways to achieve greater efficiency. Strong leadership to influence future budgetary decisions and create strategies to develop managers at the point of care can facilitate successful conflict resolution and reduce conflict at the point of care.

References


The ‘Fall Guys’

Charlotte Hannon, Clinical Facilitator; Alva Efondo, RGN; Nurse Practice Development Unit

Introduction
Slips/trips/falls contributes annually to over one third of National Adverse Event Management System (formerly STARSWeb) which could have/did lead to unintended and unnecessary harm. In addition, some €520 million is the estimated annual spend in dealing directly with the sequelae of falls and fractures.

Overall Aim & Objectives
To implement the ‘National Strategy for the Prevention of Falls and Fractures in Ireland’s Ageing Population’ (National Strategy)1

To reduce ‘falls with harm’ (i.e. A Fall with harm includes sutures, fractures etc.)

Methodology
Three pilots were introduced into the ward during the year, each utilising the PDSA2 cycle for assessment. Use of screening questions and safety cross; Use of medical pathway referral form; and Intentional rounding for high risk patients. A Fall Liaison Nurse was appointed 1.5 days a week to support the initiative.

Patients were screened for fall risk on admission. ‘falls care plan’ commenced if necessary. Identification of high risk patients by using the mnemonic (“ABCs”):
- Age over 85
- Bone disorders
- Coagulation disorders
- Confusion.
- Surgery (recent)

Patients identified as ‘At Risk ’ had a patient Information Leaflet provided
At risk patients had ‘medical pathway’ completed by attending team
Cohorting ‘High Risk’ patients and using ‘intentional rounding’.
Completing the ‘fall risk’ on communication white board, (orange magnets).
Using orange stickers on/in medical notes to indicate patients who had fallen
Using the ‘Huddle’ after each fall event to initiate ‘why’ analysis.
Used bed and chair alarms, one-to-one observation when necessary.
Engaged the whole team including ancillary staff.
CNMs integrated rounding into routine work.

Results
The trend for falls is down, the unit had only one ‘fall with harm’ during the year. Reporting of falls has improved, tracking of outcomes is more reliable. Anecdotally, the ‘intentional rounding’ is working, although the fall rate for this cohort of patients has not fallen.

Conclusion
The pilot has reduced falls with harm and the trend for falls is down,
The medical pathway will be adjusted and re-piloted.
Nursing management will be notified of the ‘huddle’ post fall.

References
Audit on implementation of bapras/boa guidelines on open lower limb fracture management.

Ramasamy A, Hassan F, Kutty S

Department of Orthopaedics and Trauma

Introduction
The British Orthopaedic Association (BOA) and British Association of Plastic, Reconstructive and Aesthetic Surgeons (BAPRAS) guidelines on the pre operative management on open tibia fractures was updated in September 2009. The update was a much needed resource as different management protocols existed for treatment is open fractures leading to unsatisfactory clinical outcomes for patients. A retrospective case note analysis was under taken of all the open lower limb fractures presenting to Sligo General Hospital between November 2011 and December 2013.

Aims & objectives
The aim of this audit was to investigate the implementation of BAPRAS/BOA guidelines in primary management of open lower limb fracture in the Emergency department (ED) [principal recommendation no 2, pg8, Standard for the management of open fractures of lower limb BAPRAS 2009 www.bapras.org.uk ].

Methodology
Retrospective audit carried out on 11 consecutive patients with lower limb fractures presenting to the ED at Sligo General Hospital from 2011 to 2013. The Integrated patient management system IPMS was used for identifying the cohort of patients. Open fracture initial management details were obtained from ambulance crew/ para medical staff records and emergency medicine case records.

Results
The least frequently completed tasks were taking photographs of wound(45%), documentation of ATLS assessment (18%), documentation of Gustillo Anderson classification(0%) and avoiding wound handling in ED (45%). These are likely to represent staff being unaware of guidelines. In contrast the following tasks were undertaken in a higher proportion of patients: administering appropriate initial antibiotics (73%), Tetanus immunisation(91%), application of wound dressing, fracture splinting and obtaining radiographs(100%).

Conclusion
Our results show significant opportunity for improvement in the acute care of open lower limb fractures. There are simple measures that are likely to provide the tools to rectify the current situation. There are clear guidelines set by BAPRAS/BOA which are not fully followed and by highlighting this we hope this will improve compliance among front line staff who involved in open fractures management.

References
www.bapras.org.uk/downloaddoc.asp?id=141
Meeting nice targets for adults with diabetes

M Murphy, L Cullen, J Forde, Dr L Doherty

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The National Institute for Clinical Excellence\(^1\) defines optimal care of adults with diabetes as having access to nine basic care processes. The Irish Diabetes Prevalence Working Group recommended that data on diabetic patients should be stored centrally allowing information sharing and cooperation between primary and secondary care, supporting latest care guidelines and service development.

In HSE-Donegal a diabetes register was established to improve patient care by monitoring nine care processes and target achievement, promoting record sharing, reducing duplication of service provision and providing an accurate estimate of prevalence. An Electronic Patient Information system (ProWellness) is used to capture clinical information on all patients with diabetes that attend Letterkenny General Out-Patients Department (1136 patients in 2011). This system is used by clinic nurses, doctors, diabetic nurse specialists, dieticians, podiatrists and ophthalmologists.

Analysis of the data captured since 2005 reveals that the actual prevalence of diabetes in those over 18 years was higher (4.3%) than estimated by the Institute of Public Health (3.5%)\(^2\). The percentage of patients in 2011 receiving at least one of the nine care processes ranged from 99% (HbA1c) to 62% (Alb/Creat Ratio). Target achievement ranged from 18% (180/1013) achieving a healthy BMI to 81% (753/ 926) achieving a cholesterol of <5mmol/l.

HSE-Donegal is the first LHO service to effectively implement a system that facilitates data capture, information sharing and thereby successful management of patients with diabetes. The provision of annual reports on target achievements for each of the care processes informs and encourages the associated healthcare professionals.

\(^1\) Quality standard for diabetes in adults (March 2011) NICE Clinical Practice Quality Standards Programme
Delayed Surgical fixation of Hip fractures
Jooste R, Moran P, Judge A, Gilmartin S, Ahmed
Anaesthetic Department, Level 8, SRH

Introduction
Early surgical fixation of hip fractures improves patient outcome. The target set by both the National Hip Fracture Database (NHFD) and the Irish Hip Fracture Database (IHFD) for time to surgery from admission is 36 hours.

Methodology and Aims
A Retrospective audit was conducted in Sligo Regional Hospital (SRH) on all patients with hip fractures from January - June 2013 where time to surgery from admission was beyond 36 hours. The aim was to establish and compare the reasons for delay to the published list of reasons in the AAGBI Guidelines for Hip Fractures (2011), the NHFD National report (2013) and the IHFD Preliminary report (2013).

Results
23 out of 54 (43%) hip fractures had surgical fixation beyond 36 hours. 19 patients were included in data collection (4 excluded due to unavailable charts). The median time to surgery was 94 hours. Reasons for delay included: awaiting medical review (8), anticoagulation (5), lack of theatre time (4), awaiting special investigations (1), not documented (1). 42% of the reasons for delay are acceptable as per the AAGBI guidelines. High INR due to warfarin delayed surgery in 5 cases with a median time to surgery of 138 hours (no reversal protocol).

Conclusion
The majority (58%) of reasons for delay in surgical fixation of hip fractures beyond 36 hours of admission in SRH are avoidable. This emphasises the need for early multidisciplinary involvement in preoperative optimisation of these patients. Anticoagulation was responsible for the longest delay in median time to surgery. A Warfarin Reversal protocol has been developed and is currently under review by the Haematology department. Audit results were presented to the Anaesthetic and Orthopaedic departments. We are re-auditing delayed surgical fixation of hip fractures in patients on warfarin as part of the ongoing quality improvement process.

References

Danny Keohane1; Mairin Rooney2; Dr Sarah Casserley-Feeney2,
1Public Health & Health Promotion Dept., IT Sligo; 2Physiotherapy Dept...Sligo Regional Hospital

Introduction
Osteoarthritis (OA), shows rising global prevalence1, with associated disability and costs expected to double by the year 20202.3. Guidelines4 recommend self-management interventions, e.g. exercise, but outcomes are limited by poor patient compliance5. Identification of reasons and suggestions to improve self-management compliance are warranted.

Aims & Objectives:
Identify barriers and provide suggestions to enhance compliance with exercise interventions, for patients with OA.

Methodology:
Qualitative study; semi-structured group interviews with i) patients ii) clinicians.

Inclusion/exclusion criteria:
Patient: Male/Female; > 45 years, Diagnosis OA in ≥ 1 joint; Referred for physiotherapy by Rheumatologist or GP. Excluded if had poor English, cognitive impairment or contraindications to exercise.

Clinician group: Member of the Sligo-Leitrim Rheumatology team/ Sligo Sports Inclusion Officer(s) (SSRP)

All participants provided signed consent.

Interviews were audiotaped, transcribed, anonymised and analysed using Interpretative Phenomenology Analysis (IPA). Patient demographic and disease impact data were collected at baseline and descriptive analysis (Microsoft Excel 2007) used to provide mean group scores.

Results:
Between May and June 2014, 3x group interviews were conducted [2x patient groups (n = 4/group); 1x clinician (n = 6)]. Patients were predominantly female (87.50%; n=7); mean age 57.13 yrs. Mean (sd) duration of OA symptoms was 10 (6.68) yrs. All patients had OA in more than one joint.

Outcome measures’ mean (sd) were {EQ5-D [TTO: 0.644(0.257); VAS 0.640(0.14)]; HAQ- [DI: 1.02(0.672); Pain VAS:1.69(0.727); Global VAS:1.20(0.803)]. Stages of Change (SOC) questionnaire indicated that most patients, 50% (n = 4) were in Maintenance stage.

Patient barriers were categorised as i) individual (eg low confidence, pain), ii) environmental (eg no local facilities/ instructors), iii) socioeconomic (eg attendance/travel costs), iv) clinician (eg poor information delivery; lack of follow-up).

Clinicians recognised need for patient education, but cited i) low awareness of local exercise services, ii) low confidence in prescribing exercise and iii) clinic consultation times, as reasons for rushing/omitting this intervention and failing to develop “Self Management Support Systems” (SMSS).

Conclusion: Barriers to patient compliance with exercise are multifaceted. Integrated multi-agency care models and enhanced SMSS, could improve compliance with self-management interventions for patients with OA, and reduce future healthcare and social burden.

References:


Outcomes of the Colorectal Screening Programme in Sligo Regional Hospital after the first year.

Cassidy, M., Walsh, K., Endoscopy Unit SRH

Introduction
The Colorectal Screening Programme was launched in 2013. Clients aged between 60-69 years are being invited to complete a faecal immunochemical test (FIT). If positive, clients are offered a screening colonoscopy. Sligo Regional Hospital commenced screening in May 2013 following accreditation from the Joint Advisory Group on GI Endoscopy (JAG). The aim of the programme is to detect pre-cancerous adenomas in the bowel lining, thus reducing the mortality from colorectal cancer.

Aims & objectives
This audit aims to highlight the outcomes of the Colorectal Screening Programme in Sligo Regional Hospital after its first year.

Methodology
From May 2013 to May 2014, 242 screening colonoscopies were carried out in Sligo Regional Hospital. All clients were entered onto a database. This analysis is of the clients that were screened by Dr Walsh over this period resulting in 164 clients in total.

Results
During the first year, 66% of clients who were FIT positive were men. While 84% of clients were found to have pathology from their colonoscopy. 58% of polyps were found to be < 1 cm, while 26% were > 1 cm. 66% were found to be adenomatous. Cancer was found in 4% of those screened with 2% occurring in the rectum and 2% in the sigmoid. Follow up will require 22% returning in 1 year’s time for colonoscopy, 51% requiring a FIT in 2 years and 18% due back in 3 years for a colonoscopy.

Conclusion
In the first year of colorectal screening in Sligo Regional Hospital, Adenoma Detection Rate (ADR) was higher than expected 25%-35% of colonoscopies, while Cancer detection rate would also appear higher than anticipated > 2- 5 per 1,000 screening colonoscopies.1. These early results indicate that Colorectal Screening has the potential to be one of the most effective preventative health measures for clients living in the North West of Ireland.

References
Do populations with psychosis experience inequalities in smoking cessation interventions?

Whelan, A., Kent, P., Finan, K., O'Mahony, E., Jensen, M., Tchum, I., Adamis, D., McCarthy, G

Smoking Cessation Service, Sligo General Hospital; Sligo/Leitrim Mental Health Services Respiratory Department, Sligo General Hospital; Research and Education Foundation, Sligo General Hospital

Introduction

Highest tobacco use occurs in mental health service users, where up to 70% smoke1, compared to 22% in the general Irish population2. Individuals with schizophrenia have a twofold-increased risk of death from cardiovascular disease and threefold-increased risk of death from respiratory disease and lung cancer3. Yet psychiatric patients are one of the least studied groups of smokers, and little is known about their access to cessation treatment4.

Aims & objectives

This study aims to investigate whether smokers with history of psychosis are given the same advice and support regarding smoking cessation as smokers with medical illnesses.

Methodology

This cross sectional study collected quantitative data from 136 smokers (80 with psychosis, 56 with medical illness) in Sligo/Leitrim in 2013/14. Exclusion criteria for the control group included previous history of anti-psychotic medication and/or hospitalisation for mental illness. Individuals completed a Fagerstrom nicotine dependence test, spirometry test and purpose-designed questionnaire regarding smoking cessation advice. All statistical analyses were performed using SPSS software Version 21.

Results

Findings showed 59% of smokers with psychosis had been advised to quit by a health professional compared to 75% of controls. Those with psychosis had less desire to quit smoking (61% compared to 93%) and recorded slightly higher Fagerstrom scores (median difference=1). Participants were offered referral to the smoking cessation services; 6 (8%) smokers with psychosis and 7 (13%) controls attended. However, if only the sub-dataset of those with a desire to quit were included then 12% of cases and 13% of controls attended.

Conclusion

In our study, smokers with psychosis were not given the same level of advice regarding smoking cessation. Importantly, smokers with psychosis showed similar willingness to engage with cessation services. Therefore, it is essential health professionals are aware of this inequity and become more assertive in getting this high-risk population to access and engage with cessation services.

References

Central Statistics Office Ireland, 2013
The Establishment and Delivery of Nurse-led Asthma Clinics

Aisling McGettrick (3rd year BNSc student; St Angela’s College) and supervisor Dr. Michele Glacken

Background:
Many chronic conditions such as Asthma are apt for management by clinical nurse specialists. To date the development of nurse-led clinics in this area has not grown at the pace the prevalence of this condition would warrant.

Aim:
To explore the experiences of nurses who have established and are running nurse-led asthma clinics.

Objectives:
To explore the challenges and facilitators encountered during the process of establishing and running a clinic
To explore nurses perceptions of the value of nurse-led asthma clinics to patients; the health service and to themselves as practitioners.

Methodology:
A qualitative, descriptive exploratory design was deployed. Volunteer sampling generated a sample of six nurses running nurse-led asthma clinics in various settings, both urban and rural in the Republic of Ireland.

Data Collection:
Semi-structured telephone interviews were used as the means of data generation. Content analysis was subsequently conducted. A number of strategies such as the maintenance of an audit trail and internal member checking were used to ensure the rigour of the findings generated.

Conclusions & recommendations:
Personal, financial and resource commitment on the part of care providers (primary and secondary) is vital to the establishment and subsequent delivery of the service. Challenges encountered varied from available resources; insufficient administrative support; cost of the service and the percentage of patients who chose not to attend at prescribed clinic times (D.N.A’s). The service was perceived as beneficial to patients, families, the health service in terms of reduced admissions and length of hospital stays. Running a nurse led clinic was perceived as both empowering and satisfying for the participants. The study revealed that there is a need to develop a nationally agreed structured and strategic approach to assist nurses in the development of nurse-led asthma clinics.
In-line Monitoring of the Degradation of Bio-Polymers for the Medical Device Industry

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Bioresorbable polymers are predicted to have a significant impact on modern medicine. They are increasingly being used to create temporary medical devices for implantation inside the human body. Such a device provides temporary mechanical support and/or other functions and break down over time into simple non-toxic products – ideally at the same rate that the body’s own tissue regenerates. However, high development and manufacturing costs have hindered growth of the industry. Melt processing is required, where the heating and shearing of the material tends to degrade the material. Currently, long and expensive trial and error periods are required to establish process settings for a new device and yet result in typical scrap rates of 25-30% - in many cases this is prohibitive to successful commercialisation.

The potential to use vibrational spectroscopy techniques together with chemometric modelling to analyse the degradation of a bioresorbable polymer is investigated. Such a method has the advantage of being possible to implement online during processing of the polymer and as such could provide real-time information on key product properties removing the need for expensive trial and error approaches.

PLA was processed at various temperatures to induce increasing levels of degradation. A degradation marker of the samples was quantified, and the samples were then studied with Near-Infrared spectroscopy. The resultant spectra were subjected to various qualitative and quantitative chemometric methodologies with a view of soft-sensing the amount of degradation (by quantifying lactide content)

Chemometric models of NIR data were able to rapidly classify PLA samples showing differing degrees of process induced degradation. This was extended to build a model which was able to predict the degradation marker content of the analysed sample with a relatively good degree of accuracy.

The work presented in this study has shown the feasibility of monitoring levels of process induced degradation in PLA. This has been carried out using techniques which may be utilised in-line with the processing environment.
Hypoglycaemia and driving – clinical audit on the patients’ experience.


Diabetes Nurse Specialists, Sligo Regional Hospital.

Introduction
The Road Safety Authority Medical Fitness to Drive Guidelines for Group 1 & 2 drivers was updated in April 2014. Prior to this a decision was made by the Diabetes Nurse Specialists in Sligo Regional Hospital to audit patient knowledge of the driving guidelines and their management of hypoglycaemia if it occurs while driving.

Aims & objectives
The aim of the audit was to determine where deficits in knowledge exist in order to develop a leaflet for patients on the driving guidelines and their management of hypoglycaemia if it occurs while driving.

Methodology
The audit was conducted in August - September 2013. Criteria and standards were adapted from the Road Safety Authority guidelines and a questionnaire was devised. The Diabetes Nurse Specialists invited 112 diabetes patients to complete the questionnaires.

Results
Audit results indicated a mixed level of knowledge among patients regarding the driving guidelines and also in the appropriate management of hypoglycaemia should it occur while driving. This confirmed a patient knowledge deficit and justified the need for the leaflet.
It was also highlighted as a result of the audit that just over 50% of patients carry personal diabetes identification. As a result the diabetes nurses developed a personal identification key-ring. This was essential in bridging the deficit in the knowledge evident in our patient cohort.

Conclusion
The patient information leaflet was planned in an effort to improve awareness and knowledge in order to reduce the risk of driving accidents due to hypoglycaemia.
Since the development and introduction of the leaflet there appears to have been a marked improvement in patient awareness and knowledge of the driving guidelines and management of hypoglycaemia. Patient and Healthcare Professional response to the leaflet and the key-ring has been extremely positive.
Reflecting on reflection: an audit of reflective writing

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Introduction
Reflective practice is a process of thinking analytically about an event or experience in order to identify lessons learnt and any learning needs. The value of reflection in professional development is increasingly recognised. Reflective writing is a means of documenting reflective practice.

Aims & objectives
To assess, quantitatively and qualitatively, my use of reflective writing and identify means for improvement.

Methodology
Standards were adapted from the UK Faculty of Public Health (FPH) professional development programme. Reflective notes are compulsory in this programme and subject to audit. Notes are required to address four elements:
What was the learning need of the activity?
What did I learn?
How will I apply this learning?
What am I going to do in future to further develop this learning?
Responses to each element are graded ‘good’, ‘borderline’ or ‘poor’ according to a grading matrix. Notes are then given an overall rating of ‘good’ or ‘poor’, depending on the quantity and quality of element responses. Activity logs entered into my e-portfolio between January 2013 and March 2014 were reviewed. Reflective notes written were extracted for quality assessment.

Results
Of 39 e-portfolio logs, 28 (72%) included a reflective note. One note addressed two of the required elements; 23 addressed only one; four addressed none. Of 25 element responses - 22 rated ‘poor’; three ‘borderline’. No notes met the criteria for an overall ‘good’ classification; three notes were rated ‘poor’; the remainder were below the FPH ‘poor’ standard.

Conclusion
Some attempt at reflective writing was made for the majority of e-portfolio logs. However the quality of notes was poor. Reflective practice and reflective writing is a process and a skill. Guidance and training from professional bodies may benefit. The use of templates may also assist. A re-audit will be conducted in October 2014.
A study to assess the prevalence and severity of DIMS (disorders of initiating and maintaining sleep) in a sample of Irish children aged 6-48 months.

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Introduction
Disorders of initiating and maintaining sleep (DIMS) are relatively common in young children. International literature identifies a prevalence rate of 20-40%1 amongst children 1-5 years. Currently there are no published studies which indicate the prevalence rate in an Irish population. Sleep disturbance can impact significantly on family life and can lead to neurocognitive and psychosocial impairment, but if identified early, interventions to address sleep difficulties have been shown to have consistently positive outcomes1.

Aims & objectives
The aim of this study was to establish the prevalence of sleep disorders in a sample of 6-48 month old Irish Children and the suitability of the Tayside Children's Sleep Questionnaire2 (TCSQ) for use in the primary care setting to identify children with behavioural sleep disorders.

Methodology
The study is a cross sectional study in two populations. The clinical sample comprised 50 children referred to a sleep clinic in Donegal. The control groups consisted of 100 children attending the PHN for routine developmental assessment, in two sites in Kildare and Donegal. Parents were asked to fill out demographic details and the TCSQ.

Results
The prevalence rate of DIMS in the clinical sample was 96%. In the Donegal control sample the prevalence rate of DIMS was 40% compared to a rate of 66% in the Kildare control sample. There was a significant difference in scores on the TCSQ between the clinical vs. control groups. There was a significant relationship between scoring above the TSCQ cut-off point and parent's subject perception of whether or not their children had sleep difficulties. The TSCQ was also identified by PHN's as a useful screening tool for DIMS.

Conclusion
The prevalence rate of DIMS in this study was slightly higher than previous studies.
The results of this study indicate that the TCSQ is a suitable screening tool for use in a Primary Care Setting to identify DIMS in children 6-48 months.

References
Determining the balance of mitochondrial regulation, function and DNA damage post controlled patterns of simulated sunlight radiation

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Introduction
UV radiation contained within natural sunlight causes cell damage or death by directly altering DNA and proteins and by producing reactive oxygen species (ROS) [1] [2]. These processes disrupt cellular energy metabolism at multiple levels [2]. Mitochondria are particularly prone to damage, given the unique nature of mitochondrial DNA compared to nuclear DNA in particular. In addition to their classical metabolic function [3] [4], mitochondria also have a key role in cell death, regulation and ROS production [3]. Disruption to these processes contributes to a range of pathologies [5]. Natural sunlight can represent a serious threat to the integrity of mitochondrial DNA [3] as its proximity to the site of oxidative phosphorylation increases the chances of interacting with mitochondrial ROS [2][3]. Its lack of protective histones and limited capacity for DNA repair and its typical multi-heterogeneous nature makes mitochondrial DNA damage a good candidate for developing biomarkers for cumulative sunlight exposure.

Aims & objectives
To investigate the effects of sub-lethal simulated sunlight irradiation on human skin cells in vitro
To determine medium and long term cellular tolerance to such exposures.

Methodology
A Q-Sun solar simulator was used to expose cells to simulated solar irradiation (SSI). HaCaT (human epidermal derived fibroblasts) and HDFn (human dermal derived fibroblasts) cells were exposed to either 0 or 60 seconds of SSI delivered either once only or repeated a second time 7 days later. Cell survival was determined from 0 to 21 days after the first exposure using a Z2 Particle Analyser to count cells.

Results
HaCaT are more tolerant to SSI than HDFn. Both cell lines appear to tolerate a single exposure to SSI for 60 seconds and recover after a number of days. Neither cell type progeny tolerate a repeat exposure to SSI for 60 seconds, and show a progressive decline in cell number for up to 14 days later.

Conclusion
Results suggest that the treatment regime that has been characterised represents an ideal platform on which to evaluate the potential for mitochondrial DNA damage, mitochondrial dysfunction and altered mitochondrial regulation and the role of same in sunlight-induced skin cell damage.

References
Managing Behaviours That Challenge? Promoting Psychosocial Interventions as a First Line Intervention in Dementia Care.

K. mc Laughlin, (CMHN), Dr. L. Muresan, (Registrar), M. Cryan, (Team Co-ordinator) & Dr. G. McCarthy, Consultant Psychiatrist, Psychiatry of Later Life.

Introduction.
Many older persons with dementia live in residential care settings and have complex needs (1). Cognitive and functional impairment often co-exist with additional mental health problems such as aggression, agitation, depression and psychosis (2). Psychotropic medications are often used to control the behavioural and psychological symptoms of dementia (BPSD) and whilst there is some evidence to suggest some moderate effectiveness, these positive effects may be offset by severe adverse effects such as sedation, falls, extrapyradimal and anti-cholinergic symptoms. Antipsychotics may increase the risk of stroke whilst benzodiazepines and antidepressants may increase the risk of falls and fractures (3). There is growing evidence to suggest that staff training, promoting person centred care (PCC) and utilizing non-pharmacological, psychosocial interventions improve some key health outcomes and can reduce antipsychotic drug use (4).

Aims and objectives.
To identify those persons referred to the Psychiatry Of Old-Age (POA) over one year, who currently reside in a residential care setting that presented with behaviours that challenge. To further identify the prevalence of psychotropic drug prescription as well as seeking evidence of psychosocial interventions as a management approach for these behaviours.

Methodology.
Case notes for all referrals to POA service in one calendar year were analyzed and clients in long term care homes were identified. Psychotropic medication prescription was noted. A subsequent review of available case notes (58%) sought evidence of psychosocial interventions as a management approach in addressing BPSD.

Results.
53% prescribed permanent antipsychotics, 25% prescribed permanent benzodiazepine and 66% prescribed antidepressants.
Psychosocial interventions were recommended within 72% of those case notes that were available for subsequent review; however it is unclear from the notes if these approaches were used.

Conclusion.
Pharmacological intervention is the most common approach to managing behaviours that challenge despite several studies highlighting reduced agitation for persons with dementia following interventions based on meaningful activities and psychosocial interactions (5).

References.


“Warming up in the Operating Theatre”
Margaret Given
Recovery Dept, General Theatre, Sligo Regional Hospital

Introduction:
Peri-Operatively patients are vulnerable to many adverse outcomes such as inadvertent hypothermia. Data suggests that 70% of surgical patients experience inadvertent hypothermia¹. Complications as depicted by Roberson et al (2013) include decreased metabolic rate, altered clotting function, and increased incidence of infection.² Guidelines from the Royal College of Surgeons in Ireland³ state that the patient’s temperature should be maintained at 36°C peri-operatively to prevent surgical wound infection. Additionally guidelines from the National Institute of Clinical Excellence (2012) provide minimum standards that should be met to prevent hypothermia peri-operatively⁴. The authors aim was to establish if our department was meeting these standards. A local clinical audit was conducted locally to establish if practice adhered to local and international guidelines.

Aims & Objectives:
To reduce the incidence of inadvertent hypothermia.
To improve standards of care.
To establish if existing practice meet current guidelines.
To determine methods of warming employed.
To develop recommendations for practice if required.

Methodology:
A concurrent audit of 43 patients was employed in this project.

Results:
12% of patients were hypothermic prior to induction of anaesthesia.
53% of patients were hypothermic on arrival in recovery following surgery.
25% of patients had forced air warming in theatre.
18% had fluids warmed during surgery.
7% of patients had under warming blanket during surgery.
5% of patients had increased length of stay in Recovery due to hypothermia.

Conclusion: The findings indicate that 12% of patients were hypothermic pre-operatively. Pre-warming of patients before surgery needs to be considered as a Quality Improvement Project to improve standards of care for patients peri-operatively. Additionally significant findings were identified relating to the incidence of inadvertent hypothermia in 53% of the cohort. The author suggests that there needs to be an increased focus on reducing hypothermia peri-operatively as a consequence of these findings.

References:
3. RCSI (2012) Preventing Surgical Site Infections Key Recommendations for Practice Developed by the Joint RoyalCollege of Surgeons in Ireland/Royal College of Physicians of Ireland Working Group on Prevention of Surgical Site Infection. Dublin: RCSI
Rinn Na Cuirte Home from Home: a qualitative and quantitative review

Aoife McCarthy, Sean Dillane, Majella O'Donnell, Anne Gethin, Marguerite Cryan Niamh McCabe and Geraldine McCarthy

Background

'Home from Home', was developed with the HSE/Alzheimer Society of Ireland funded by a GENIO grant to provide alternative respite (day/overnight) to older people with dementia/mental health problems, in a regular bungalow in an isolated rural area. Poor transport has been identified as a contributor to Carer burden in our population, with 25% of Carers not driving (Molyneux & McCarthy 2008).

Aims/Methodology

To quantitatively and qualitatively assess this new service.

Basic demographic details, diagnosis, distance from respite house and availability of transportation, Standardised assessments of dependence/severity of symptoms (MMSE, CDT, GDS, CAPE survey, Cohen Mansfield Agitation Inventory, Zarit Burden interview with Carers), collated as part of routine care.

A purposive sample of 10 Carers, attendees and staff were interviewed for qualitative review.

Results

Year one: July 2013
N= 12 referred, 6 attended, mean attendances = 11.25/ month, mean age 80.7 level of dependence moderate; CAPE C, diagnoses: multiple psychiatric co morbidities (6), Dementia(4), depression(4), 2 serious suicide attempts, all had complex medical comorbidities, mean of 6 conditions.
Mean MMSE 24, mean distance from respite centre, 25.6 km, but 14.8 km for attendees, 9 not driving, 8 widowed/unmarried, 4 met criteria for Fair Deal.
Non attendance: lack of transport, lack of awareness/ concerns re institutionalisation nature.

Year 2: July 2014 after transport introduced.
N=20 referred, 11 attended, mean age 80.0, attendances = 43/ month. diagnoses were dementia, depression, multiple comorbidities, level of dependence CAPE C, MMSE 17, GDS mean 3.5, distance from centre = 15.2 (range 5 to 37.5), 6 meet criteria for Fair Deal. Non attendance: physical dependence, death.

Qualitative Analysis, identified four themes, homeliness, a nice place to visit 'dropping in to a friend' ( rinn na Cuirte ... a point to gather or meet), person centredness, increased self confidence.

Conclusion

'Home from Home' provides a quality local service 'locally' to people with dementia/mental health issues in this rural community, providing a focal point and support for individuals and Carers. Implementation of the findings year 1, significantly increased attendance, with the introduction of transport.
A Retrospective Study on Novel Oral Anticoagulants (NOACs) as secondary prevention of thromboembolic stroke in patients with non-valvular atrial fibrillation.

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Departments of Medicine1 & Nursing2 Sligo Regional Hospital.

Introduction

Nonvalvular atrial fibrillation (AF) confers a 5-fold increased risk of stroke (1). Internationally the prevalence of AF is 5% over 65 (2) and in Ireland 11% over 80 years (3). Oral anticoagulation is considered the gold-standard for stroke prevention in AF. Until 2009, warfarin and other vitamin K antagonists were the only class of oral anticoagulants available. While these drugs are highly effective in prevention of thromboembolism, they have a narrow therapeutic window, which requires frequent laboratory monitoring, and they have numerous food and drug interactions. These limitations have led to the development of novel oral anticoagulants (NOACs). So far, Dabigatran, Rivaroxiban and Apixaban have been approved in Ireland for the prevention of thromboembolic stroke. Despite the evidence shown in numerous randomised controlled trials, there has been debate amongst stroke physicians regarding several practical and pharmacological issues related to this class of drug.

Aims & Objectives

To determine the number of patients who received a NOAC rather than Vitamin K antagonist. To determine whether patients received adequate pharmacological education prior to commencement of anticoagulation. To evaluate readmissions for adverse events following commencement of anticoagulation.

Methodology

This retrospective review was undertaken on all patients who presented to Sligo Regional Hospital with acute Stroke or TIA and Atrial Fibrillation and were subsequently anticoagulated between Jan 1st 2013 and Sept 30th 2014. Candidates were identified by the Clinical Nurse Specialist using the Stroke Register. Discharge prescriptions and case-notes were reviewed.

Results: A total of 393 patients presented to the Stroke Service, of these 269 had ischaemic stroke and 84 had TIA. 121 were found to have Atrial Fibrillation. Of these 82 were anti-coagulated, 40 male, 42 female. 40 were anti-coagulated with a NOAC, 20 male, 20 female.

Conclusion

Early experience with NOACs has been in general satisfactory with very few adverse effects. In further work, the Stroke Service plans to evaluate the education received by patients and/or relatives through interview and/or questionnaire.

References:

Early results of Collagenase injection for Dupuytren’s contracture release.

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Introduction
Collagenase is the first pharmacological treatment licensed for Dupuytren’s contracture. It is an enzyme which is injected directly into Dupuytren's cords followed by stretching of the contracture. Collagenase has been shown to be effective in several studies and is associated with lower rate of complications and recurrence. We aim to present our experience of Collagenase with regards to early results, complication and early recurrence.

Methods
We prospectively collected data on patients who underwent treatment for Dupuytren’s contracture using Collagenase injection. We selected patients with predominantly metacarpophalangeal (MCP) joint contractures. Dupuytren’s cords were marked and injected with Collagenase as per industry protocols except we simultaneously injected multiple cords in patients with multiple fingers involvements. Patients were reviewed in outpatients in 48 hours and contractures were stretched under local anaesthetic infiltration. Patients were referred for hand therapy and night splinting. Angles were measured at MCP joints pre-injection, immediately post contracture release and at 6 – 12 weeks follow up appointment.

Results
Thirty five fingers were treated in 28 patients with average age 63.51 (38 – 80) years. 22 patients have injection of single cord while 6 were treated for multiple contractures simultaneously. Mean pre-injection contracture at MCP joint was 58.42 degree which improved to 4.11 degree immediately post treatment. At final follow (10 – 12 weeks) the mean values for MCPJ were 8.66 degree. Five fingers (14.2%) failed to stretch significantly post injection. 8 out of remaining 30 (26.66%) fingers had some recurrence of contracture by the time of last follow up requiring repeat injection in only two of those.

Complications
Bruising was noticed in 12 patients, one patient had blood blister, 4 had skin tears and one patient developed localized allergic reaction. No case of nerve injury or tendon rupture was reported in this cohort of patients. All complications resolved shortly with no long term consequences.

Conclusion
Collagenase is a safe and effective treatment for Dupuytren's contracture, which can be considered as first-line treatment and may be useful in controlling surgical waiting lists. One must be aware of potentially high risk of local complications and recurrence of contractures.
Smart consultation for musculoskeletal trauma: Accuracy of using smart phones for fracture diagnosis

Gohar Naqvi, Andrew Macey, Ashraf Dawood, Arshad Mahmood

Naqvi G, Daly M, Dawood A, Kurkuri A, Kutty S

Introduction: Musculoskeletal trauma occupies a significant proportion of the daily workload of most Emergency and Radiology departments. The diagnosis and management of patients with musculoskeletal trauma often require assessment of radiographs along with clinical assessment. With the advent of smart phones we hypothesised that they could be used as a means of smarter communication, particularly for the transfer of radiographic images between healthcare professionals.

Patients and method: We performed a cross sectional study using thirty radiographs each of the distal radius, ankle and hip. The study was approved by Ethics Committee and all data were anonymized in accordance to Caldicott guidelines and data protection act 1998. Photographs of radiographs were taken using an iphone camera and sent to three independent Orthopaedic Registrars via Multimedia messaging service (MMS). Each Registrar independently assessed these Images on their smart phone display in their own time and recorded the specific diagnosis along with the classification of fractures and specific treatment plan. The accuracy of diagnosis on smart phone was measured against the radiology report; and inter observer agreement was assessed among registrars for classification and treatment plan.

Results: The overall accuracy of fracture diagnosis was 97.7% with sensitivity of 100% and specificity of 94.4%. The inter observer agreement analysis showed kappa (k) values of 0.67, 0.67 and 0.71 for classification of wrist, ankle and hip fractures respectively showing substantial agreement while kappa values for management plan were 0.65, 0.88 and 0.65 for the three fractures respectively showing substantial to near perfect agreement.

Conclusion: This study suggests that smart phone can be used as a safe and accurate tool for skeletal trauma consultation among oncall doctors and can help reduce the waiting time in emergency departments.
The Use of Anaesthetic Rooms in Ireland, A National Online Survey.

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Introduction
In Ireland and UK it is traditional that each operating theatre has an adjacent anaesthetic room (1). The implications for equipping current theatre suites and the design of new theatres are wide-ranging (2, 3). There has never been a survey to ascertain information on equipment and anaesthetist’s attitude to anaesthetic rooms in Ireland. We felt performing this survey would provide valuable information of national standards to which institutions can be compared to.

Aims & objectives
Our aim was to survey all institutions offering anaesthetic services in Ireland as to the level of anaesthetic equipment available in their anaesthetic rooms. This information enables us to compare the equipment offered in Sligo Regional Hospital with other institutions. This information will help the Anaesthetic Department in SRH to allocate resources when considering new equipment to improve the anaesthetic services in SRH.

Methodology
We created an online survey which was sent to a representative from all 46 acute public hospitals (comprising of 41 anaesthetic departments). Quantitative results were collected anonymously online. The survey was conducted between July and August 2014.

Results
Responses were received from 38 (93%) of the anaesthetic departments. Similar to SRH, 60% of institutions have anaesthetic rooms linked to all operating theatres. SRH monitoring equipment is generally comparable to other institutions. The anaesthetic machines available in SRH anaesthetic rooms are however inferior to that provided in 67% of institutions surveyed. In SRH, like 33% of respondents, keeps the majority of anaesthetic equipment in anaesthetic room, as are the anaesthetic drugs (with 39% or respondents).

Conclusion
This is the first national data to be compiled in Ireland on this topic. It will allow institutions to compare themselves to national standards. We concluded that SRH is generally in line with other institutions except in terms of anaesthetic machine in anaesthetic rooms, where SRH falls short of the standards set by the majority of other institutions.

References
Clinical Audit and Consumer Survey of Attitudes towards a Smoke Free Campus Policy

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Introduction
Sligo Regional Hospital (SRH) as a health promoting hospital is committed to its responsibility as a health care provider not only to service users but also to its staff and visitors. The commitment includes an obligation to optimising and sustaining the quality of the hospital environment for all, this applies in particular to smoking and the use of tobacco products.

Aims & objectives
1. The investigation seeks to evaluate current compliance of staff, patients and visitors to SRH Smoke Free Campus (SFC) policy
2. Evaluate awareness of staff to their role in implementation of the policy and to Supporting service users who smoke.
3. Evaluate satisfaction levels of the SFC policy by staff, service users and visitors.

Methodology
The audit was conducted by two independent health promotion researchers, external from SRH, which negated the possibility of research bias.

1. The audit was conducted over a 4 week period commencing 30th April 2014 concluding 21st May 2014.
2. It employed a multi-method approach based on quantitative questionnaires and observation assessments throughout the hospital campus and its associated buildings.
3. Questionnaires were designed specific to each population group

Results
1. 84% of participants surveyed agreed with the concept of a SFC with 94% of visitors been aware of policy and 67% agreeing with the policy.
2. 59% of all surveyed agreed that cleaner environment with no exposure to second hand smoking was the greatest perceived benefit.
3. 82% of staff surveyed did not smoke of which 69% agreed with policy.
4. 12% of patients only were offered nicotine replacement therapy (NRT) for the duration of their stay.

The observational audit demonstrated that there was evidence (cigarette butts) of smoking on site however there was no visible smoking observed.

Conclusion
Implementation of a SFC policy in SRH has been welcomed however there were areas identified in the audit that the working group need to review and follow up. Of particular concern was the small percentage of patients who received support for their nicotine addiction as in patients. It is clear that ongoing monitoring and information is required to ensure that smoking is treated as a health care issue when patients are admitted to hospital.

References