IRISH RESEARCH NURSES NETWORK

6th ANNUAL NATIONAL CONFERENCE

NATIONAL HARMONISATION OF CLINICAL RESEARCH

ABSTRACTS
NURSES FORUM
PRESENTATIONS AND POSTERS
01: Oral Presentation

Ms Siobhan McFadden, RGN, BSc, MSc Research Candidate. Clinical Research Nurse, RCSI Clinical Research Centre, Smurfit Building, Beaumont Hospital E-mail: siobhanmcfadden@rcsi.ie

Title: An exploration of the psychological indicators of aspirin adherence in patients with stable coronary artery disease using a direct assay measurement

Authors: McFadden S\textsuperscript{1}, Foley DP\textsuperscript{2}, Kenny D\textsuperscript{3}, Doyle F\textsuperscript{3}.
1) Department of Molecular and Cellular Therapeutics, RCSI, Dublin 2,
2) 2 Department of Cardiology, Beaumont Hospital, Dublin 9,
3) 3 Division of Population Health Science (Psychology), RCSI, Dublin 2.

Abstract: Although prescribed to approximately 90\% of persons with cardiovascular disease (CVD), it is estimated that adherence to aspirin therapy is only approximately 70\%. Established psychosocial predictors of adherence include depression, social support, and patient beliefs about medicine and illness. However, no study has assessed these simultaneously to determine the best predictor of adherence, and no study has used an objective measure of aspirin adherence.

After ethical approval we surveyed 189 patients with CVD from Beaumont hospital who had already participated in a study on the validity of the aspirin assay measure. The main findings from this study are that patients who were male, younger in age, overweight, and had a high alcohol intake were most likely to have an inadequate response from their aspirin therapy. The following measures were used to assess the psychological predictors of adherence: Patient Health Questionnaire-2, ENRICHD social support questionnaire and Beliefs about medicines and illness questionnaires were administered either by post or by interview to patients who were willing and able to consent for the sub-study. Data was amalgamated with the initial study and analysed to determine the best predictors of aspirin adherence.

Results- 106/189 (57\%) responded to the survey(186 had a thromboxane blood level). The mean age was 65yrs(45\%). 69\% had an effective response, 31\% had an ineffective response (defined as serum thromboxane B2 levels of greater than 2.2ng/ml-Maree AO et al 2005)

Most psychological variables correlated significantly with each other as expected.

No psychological variable was associated with thromboxane level.

Further data analysis is needed to examine confounding variables such as hyperglycaemia and hyperlipidaemia on thromboxane level.
**Title:** Analgesia and Sedation Management in PICU: The Impact of New Guidelines on Patients and Staff

**Authors:** Claire Magner, Monique van Dijk, Dermot Doherty, Ricardo Segurado, Seamus Cowman.

**Abstract:**

**Background and aims** The use of analgesia and sedation guidelines in adult intensive care settings has been associated with significant patient benefits\(^1\). In the paediatric setting the evidence to support this change in practice is inconclusive\(^2,3\). Neither is it likely to succeed without the support of clinical staff\(^4\). The aim of this research was to determine how the implementation of analgesia and sedation guidelines incorporating the COMFORT-B pain and distress assessment tool in PICU affected:

- The dosage of morphine administered to post-op cardiac PICU patients
- Patients’ length of ventilator dependence and PICU stay
- Staff perceptions of analgesia and sedation practice.

**Methods** A quasi-experimental approach was used employing a before/after design. Data from cardiac non-equivalent control (n=61) and intervention (n=64) patient groups were collected for the first 72h (3x 24-hour epochs) post-op. Staff surveys were conducted before and after guideline introduction. Chi-square analysis, t-tests and Mann-Whitney U were used for group comparisons.

**Results** A non-statistically significant reduction in morphine administered to patients via intravenous infusion emerged after the intervention (Table 1). There was a significant change in morphine administration practice; characterised by lower rates of morphine on return from cardiothoracic surgery and an increase in use of morphine boluses.

Median duration of ventilation was median 1.27, days [IQR 0.96-2.16] before the intervention and 1.07 days [IQR 0.82-1.73] after the intervention (p=0.07). Duration of PICU stay was 3.5 days (IQR 1.9-6.26) before and 2.84 days (IQR 1.9-4.73) (p=0.28) after the intervention. PICU staff satisfaction increased after guideline introduction, consistent with 70.3% compliance with the guidelines.

**Conclusion** A change in analgesia and sedation management in line with best international practice has been successfully implemented. There are considerable potential patient benefits of basing analgesia and sedation management on robust assessment using validated tools. PICU staff value and adhere to the guidelines.
Title: Are there signs of palmar skin hyperlinearity at birth which can predict atopic eczema at 6 months?

Authors: Connolly J, Dunn Galvin A, Hourihane J O’B, Irvine AD, Khashan, Murray D & the BASELINE Team.

Abstract:

Background Atopic eczema is a chronic relapsing inflammatory disease that affects 5-20% of children worldwide, it presents in the first few months of life, and is the foundation for the progression of atopic disorders; atopic eczema, food allergies, allergic rhinitis, and asthma.

Aim To investigate the prevalence and spectrum of palmar hyperlinearity (PHL) a phenotype of eczema and whether 3 independent investigators’ assessments of PHL could predict eczema in a new-born population. To determine if there is an inter observer relationship between the 3 investigators PHL assessments.

Methods 85 infants participating in the BASELINE Study had palmar images taken at birth, 2 months and 6 months of age and examined by 3 investigators for PHL. Binary logistic regression, cross tabulation analyses investigated the prevalence of PHL and the relationship between PHL and eczema. Interclass correlation (ICC) examined for interobserver relationship.

Results 27% (23/85) had a diagnosis of eczema at 6 months. Logistic regression showed statistical association between Investigator 2’s Month 2 PHL assessments and eczema at 6 months (Exp(B) = 1.57, p≤0.05). ICC showed no interobserver relationship between the 3 investigators, all ICC measures <0.5.

Conclusion PHL at birth and Month 6 were not associated with eczema at 6 months, there was some weak association at Month 2 but the study due to sample size could not confirm this, therefore a larger sample size would be required to provide a stronger study.
04: Oral Presentation

Lorna Greene, BSc Nursing & Laura Dunne BSc Nursing, Research Nurses, Trinity College Dublin
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Title: TILDA: An Overview and Future Plans

Authors: Lorna Greene & Laura Dunne

Abstract:

Background The Irish Longitudinal study on Ageing (TILDA) is a major inter-institutional initiative lead by Trinity College Dublin. It provides high quality information relating to older people in Ireland. A nationally representative sample of 8504 adults aged 50 and over and their spouses of any age were recruited to the study at baseline. The study contains three aspects; a structured interview using computer-aided-personal-interviews (CAPI) in the participant’s home, self-completion questionnaire (SCQ) and comprehensive Health Assessment. The CAPI and SCQ are conducted two yearly and the Health Assessment is carried out every four years.

Methods The CAPI is administered by a trained interviewer and includes questions on; demographics, socioeconomics, social connectedness, mental, physical and behavioural health. The SCQ contains questions of a more sensitive nature that are more suitable for completion by the individual themselves. The Health Assessment is a unique feature of the study. The participant can choose a home or centre based assessment and this is carried out by a trained nurse. It includes a detailed cognitive battery, novel cardiovascular measurements, detailed assessment of gait and vision, and venous blood sampling.

Results To date, Wave 1 was completed in 2011. All participants completed the CAPI, 85% took part in the SCQ and 72% opted to take part in the Health Assessment. Wave 2 was conducted in 2012; the response rate was 89%, with 84% completing the SCQ. 92% of participants who completed the Health Assessment in Wave 1 participated in Wave 2.

Future Wave 3 will begin in 2014 and the Health Assessment will be repeated. Due to the high response rate in Wave 2 it is estimated that 5,500 health assessments will be conducted. New health measures are being introduced including; new cognitive tests, muscle ultrasound, hair sampling and accelerometry. The Wave 1 dataset is now publically available and the Wave 2 dataset will be available in December 2013.
Ms Catherine Delaney & Denise Hogan, Research Nurses, St James's Hospital, Trinity College Dublin E-mail: catherine.delaney@tcd.ie

Title: ‘The Prevalence of Mental Health Problems in Relatives of People with a Diagnosis of Schizophrenia, Schizoaffective Disorder and Bipolar Affective Disorder (BPAD)’

Authors: Catherine Delaney¹ & Denise Hogan²
1) Welcome Trust-HRB Clinical Research Facility, St. James Hospital, Dublin 8
2) Department of Psychiatry, Trinity Centre for Health Sciences, St James Hospital, Dublin 8.

Abstract:

Aim/ Purpose Schizophrenia is a severe brain disease that is cross cultural and has a lifetime prevalence of 1% worldwide. A number of factors are considered responsible for this disease. These include socio-environmental stressors and it is suggested that there is an increased rate of schizophrenia in people that have a relative or parent with a diagnosis of mental health problems. The aim of this study is to establish the prevalence of mental illness in the relatives of probands with a diagnosis of schizophrenia, schizoaffective and BPAD.

Methodology 750 probands were randomly selected from a current database and their diagnosis and family history were obtained. The probands were separated into their diagnosis; schizophrenia; schizoaffective disorder; and BPAD. 315 probands with other diagnosis were excluded. Each probands family history was analysed and separated into their diagnostic categories; schizophrenia; schizoaffective disorder; BPAD; major depressive disorder (MDD); alcohol dependence syndrome (ADS).

Results The diagram below shows the number of families in which a diagnosis of a mental health disorder was found. These have been separated under the probands diagnoses.

<table>
<thead>
<tr>
<th>Diagnosis within Families</th>
<th>Schizophrenia (308 Probands)</th>
<th>Schizoaffective (56 Probands)</th>
<th>BPAD (61 Probands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schizophrenia</td>
<td>88</td>
<td>15</td>
<td>7</td>
</tr>
<tr>
<td>Schizoaffective</td>
<td>5</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>BPAD</td>
<td>31</td>
<td>10</td>
<td>21</td>
</tr>
<tr>
<td>MDD</td>
<td>107</td>
<td>19</td>
<td>31</td>
</tr>
<tr>
<td>ADS</td>
<td>92</td>
<td>23</td>
<td>15</td>
</tr>
</tbody>
</table>

Conclusion: Analysis of the data revealed a high rate of affected relative’s, it was observed that a high rate of MDD and ADS was prevalent among relatives of probands. Further investigation into these high rates would be beneficial to future research.

References:
06: Poster

Ms Catherine O’Connor, RGN, RSCN, MSc Nursing. Research Nurse, Department of Medicine, Alpha 1 Research Centre, RCSI. E-mail: catoconnor@rcsi.ie

Title: Trends in Diagnosis and Smoking Prevalence of Alpha-1 Antitrypsin Deficiency Individuals within an Irish population

Authors: C.O’ Connor, T. Carroll, L Fee, Prof N.G. McElvaney, Department of Medicine, RCSI, Beaumont Hospital, Dublin 9

Abstract:

Introduction: Alpha-1 Antitrypsin Deficiency (AATD) is an autosomal co-dominant genetic disorder associated with a substantially increased risk for the development of chronic obstructive pulmonary disease (COPD) and liver disease. ATS/ERS guidelines recommend testing of all individuals with COPD and poorly controlled asthma. The objective of the study was to investigate the diagnostic experiences of ZZ AATD individuals in Ireland.

Method: A total of 100 ZZ AATD individuals completed a questionnaire at an Alpha-1 Clinic in relation to their diagnostic experiences and clinical presentation.

Results: The mean age of symptom on set was 37.8 years +/- 1.6 (range 0.03-80); mean age of diagnosis was 44.1 years +/- 1.6 (range 0.03-80). The interval between onset of symptom and diagnosis was 7 years. The smoking history was past smokers 67%, never smokers 32% and current smokers 1%. The past smokers cohort 36% stopped smoking within the first 12 months of a diagnosis of AATD; 24% stopped smoking after the first 12 months of a diagnosis of AATD and 40% had stopped smoking prior to a diagnosis of AATD.

Conclusion: This study in the Irish population further underlines the need for adherence to the ATS/ERS guidelines and increased awareness and early detection of AATD individuals. The early detection of symptomatic AATD in the COPD population clearly correlates to an increase in smoking cessation rates.
Title: The Research Nurse’s role within the Multidisciplinary team in ensuring patient/participant safety in the clinical research environment

Author: Ruth O’Connor

Background: A clinical trial is a research study that looks at a way to find the best approach to deliver patient care. Clinical Research includes the testing of new medicines, medical devices or vaccines but can also be used to look at new combinations of existing treatments. Research is essential for any health service and is a vital aspect to the provision of effective and safe healthcare.

Aim and objectives: The Clinical Research Nurse must demonstrate knowledge and understanding of the evolution of clinical research

- To apply the knowledge and skills in the research environment and have extensive knowledge of research-related legislation
- To work within the ICH GCP guidelines

Methods: Safety awareness helps the Multidisciplinary Team to be more proactive about the challenges faced in providing safe, high quality care for participants.

- It is essential a Team lead be identified and available to the multidisciplinary team members.
- Ensuring the participant is fully informed of all aspects of the study prior to enrolment
- Ensuring quality data is collected throughout
- Prompt reporting of any adverse events
- Participant advocacy

Benefits of research for the participant:

- Enhanced standard of care for the participant
- Make a contribution to advancing knowledge
- Personal service is provided
- Continuity of care
- Research team is the participants advocate

Conclusion:

A key lesson in clinical research is the collaboration between the research nurse and the multidisciplinary research team which must be recognised by both parties to be integral to the safety of the research participants. The objective being that clinical research is aligned within a Clinical Governance system. The focus is on creating an environment and culture where excellence can flourish within that speciality with strong multidisciplinary team collaboration.
Title: The role of the Research Nurse in Bio banking with the Prostate Cancer Research Consortium

Authors: Ruth O Connor; Prostate Cancer Research Consortium Group

Introduction: At three sites in Dublin research is ongoing into Translational Epigenetic for the early detection of aggressive Prostate Cancer. The outcome of the study will generate a cohort of patients with suspected prostate cancer, of which <50% will be diagnosed with prostate cancer by histological evaluation of biopsy specimens. Bio-specimens of urine and blood plasma from this cohort will be used for epigenetic analysis in the bio bank laboratory to try to deliver better biomarkers for the early detection of aggressive prostate cancer. The purpose of bio banking is to collect and store biological samples (blood, urine, and serum), tissue samples and health information so researchers can utilise them in future studies. The main purpose of the bio bank is to facilitate researchers which will help to increase the understanding of cancer, and devise new investigations and treatments.

Aim / Purpose To examine the research nurse role within the research team in the collection of samples from patients for bio banking.

Methodology The research nurse’s role is very diverse it combines one of a clinical aspect as well as administrative role.

- Screening suitable patients – instructing patients, providing health promotion information
- Obtaining informed consent
- Obtaining samples / processing samples
- Data collecting and analysing

Conclusion The activities of the research nurse are pivotal for the success of many studies by ensuring that projects achieve their timelines and goals. The research nurse must be an expert in nursing, and in clinical care within a particular speciality.
09: Poster

Ann Collins, BSc Nursing, Post Graduate Certificate in Research Nursing; Clinical Research Nurse, RCSI Clinica Research Centre. E-mail: annmcollins@rcsi.ie

Title: A questionnaire to explore the motivations and experiences of healthy volunteers who were screened to participate in a Phase I Malaria Vaccine Study

Authors: Ann Collins, Dr Eoghan De Bara, Professor Samuel McConkey

Introduction: The first phase I malaria vaccine study undertaken at the RCSI in Dublin presented an ideal opportunity to explore the motivations and experiences of the volunteers who participated.

Very little research on the topic was available but a literature review concluded from the available studies, that financial reward was the primary motivation (Stunkel & Grady, 2010) It also identified several other motivations; namely a desire to contribute to science or the health of others, access to healthcare benefits, and scientific interest in the goals of the study. Risk was also identified as a consideration when making a decision about participating.

Methods: A quantitative design was utilised. A 32 item questionnaire was designed, adapted from an original questionnaire by Almeida et al (2007). All volunteers who were screened for the Malaria Vaccine study (n=39) were invited to complete it anonymously via survey monkey. The questionnaire asked about their socio economic status, their motivation to participate in a phase I study and their experiences as study participants.

Results: There was a 66% response rate. Preliminary results identified altruistic reasons and financial compensation as the main motivations for participation. The majority felt the experience of being involved in a phase I study was a positive one.

Conclusion: The results of this study can be used to inform and direct recruitment drives for healthy volunteers who may be interested in participating in future phase I studies, in Ireland

References


Strunkel L, Grady C, (2011) More than the money: A review of the literature examining healthy volunteer motivations Contemporary Clinical Trials May32(3) p 342-352
**Title:** Paediatric Procedural Sedation in the Emergency Department – Results from Our Sedation Registry

**Authors:** Siobhán McCoy¹,²,³, Dr. Carol Blackburn¹, Dr. Sean Walsh¹, Prof. Ronan O’Sullivan¹,²,³

¹) Paediatric Emergency Research Unit (PERU), Department of Emergency Medicine, Our Lady’s Children’s Hospital, Crumlin, Dublin 12

²) National Children’s Research Centre, Our Lady’s Children’s Hospital, Crumlin, Dublin 12

³) Department of Emergency Medicine, Cork University Hospital, Wilton, Cork

**Abstract:**

**BACKGROUND/AIMS** Procedural sedation in the Paediatric Emergency Department (PED) has become an integral component of ED practice and is widely use internationally in the US, Canada and Australia.¹,²,³ Following the implementation of the Paediatric Procedural Sedation (PPS) Programme in July 2011 to the PED of Our Lady’s Children’s Hospital, Crumlin (OLCHC), we set out to record each sedation episode performed. Our aim was to establish a patient profile for sedation, quantify the benefits of procedural sedation in the ED (admission avoidance) and create an adverse event profile for the department.

**METHODS** We developed a sedation registry using a Microsoft Access™ database, every patient who received sedation in the PED was recorded prospectively and logged by the EDs Clinical Research and Sedation Lead Nurse (SMC).

**RESULTS** Since July 2011, we have recorded 224 sedation episodes. These episodes have been divided into categories of sedation agent used, we have three agents available in OLCHC ED these are:

- Nitrous Oxide (Continuous Flow)
- Ketamine
- Midazolam

Nitrous Oxide was the most common agent used with 185 (82.5%) sedation episodes recorded. We have recorded an adverse event (AE) rate of 18.7%, which is comparable with the international literature⁴,⁵ with vomiting documented as the most common AE in this cohort, with no serious adverse events. A total of 24/224 (10.7%) patients were admitted to hospital from the ED for further management of their injuries and not as a result of the sedation received.

**CONCLUSION**

This is the first Sedation Registry in Ireland and the UK and has, for the first time, provided practitioners with a true patient profile for sedation in the ED. We envisage that the registry will become a repository for all sedation events nationwide in the future.