Annual Scientific Meeting
Thursday 5\textsuperscript{th} & Friday 6\textsuperscript{th} March 2015
Thursday 5\textsuperscript{th} March 2015
Riddel Hall, Stranmillis Road, Belfast

12:00 Registration
Conference Centre Foyer

13:00 LUNCH
The Isdell Courtyard

14:00 - 16:30 Workshop 1
Undergraduate OSCEs - developing best practice for assessment
\textit{Dr Drew Gilliland & Dr Gerry Gormley}

14:00 - 16:30 Workshop 2
Workshop of early career academics in primary care: conducting a systematic review
\textit{Dr Emma Wallace, Dr Rose Galvin, Professor Susan M Smith, Professor Anne MacFarlane}

14:00 - 16:30 Workshop 3
Physical Activity Research in Primary Care
\textit{Dr Mark Tully & Professor Simon Griffin}

16:30 Close

Queen's University Belfast

18:30 Drinks Reception
Black & White Hall

19:00 Conference Dinner
Great Hall, Lanyon Building
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<tr>
<td>09:30</td>
<td>Welcome</td>
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<tr>
<td>09:40</td>
<td>General Practice / Primary Care Research - looking to the future</td>
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<tr>
<td></td>
<td><em>Professor Domhnall MacAuley</em></td>
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<tr>
<td>10:10</td>
<td>Parallel sessions</td>
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<tr>
<td>11:00</td>
<td>Coffee</td>
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<tr>
<td>11:30</td>
<td>NHS Health Checks - evidence for best practice</td>
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<td><em>Professor Simon Griffin</em></td>
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<tr>
<td>12:30</td>
<td>‘Rapid Fire’ presentations</td>
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<td>LUNCH</td>
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<td>15:30</td>
<td>Fiona Bradley Award</td>
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<td>15:45</td>
<td>Closing Plenary: Medical Student Selection - an international perspective</td>
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<td><em>Dr Maureen Kelly</em></td>
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<td>16:15</td>
<td>Awards and Prizes</td>
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- Chair: Dr Mark Tully
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*The Isdell Courtyard*

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<td><strong>Medical Education</strong></td>
<td><strong>Multidisciplinary Care</strong></td>
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**Chair person**
- **Professor Susan Smith**
- **Dr Maureen Kelly**
- **Dr Finbar McGrady**

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  *Catriona Murphy (12*)

- **Reflections on the use of participatory research methods to include stroke survivors and primary care professionals as co-researchers in the evaluation of a primary care intervention**
  
  *Ruth McMenamin (6)*

- **Experiences of a complex intervention to identify/treat alcohol use disorders (AUDs) among patients receiving opiate treatment services in primary care settings in Ireland. A qualitative study of patients’ experiences.**
  
  *Geoff McCombe (22)*

- **‘Simple Steps’ – a general practice based physical activity intervention for pregnant women.**
  
  *Madeline Brennan (26)*

- **Impact analysis of clinical prediction rules in primary care: a review**
  
  *Emma Wallace (17)*

- **GP attitudes towards screening and treating youth mental and substance use disorders in primary care**
  
  *Dorothy Leahy (2)*

- **Should GPs target Physical Activity counselling for patients with long-standing illness or disability?**
  
  *Neil Heron (13)*

- **Cardiac arrest in Irish general practice - survivors 2007-2014**
  
  *Gerard Bury (50)*

- **Lived experiences of homelessness and mental health**
  
  *Suzanne Barror (53)*

- **The Extent to which the Lifestyle and Health behaviours of General Practitioners in the West of Ireland influences health promotion practice with their patients**
  
  *Thomas Walsh (7)*

- **Factors associated with early death in colon cancer: A nested case control study in a UK region**
  
  *Nigel Hart (27)*

- **Optimising mental disorders treatment in primary care: Development and implementation of a reporting function within electronic medical records.**
  
  *Davin Swan (25)*

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### Oral Presentations

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| 8 | Yvonne O’Connor  
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| 18| Anne MacFarlane  
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| 29| Sharon Cadogan  
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| 38| Joe Gallagher  
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| 42| Darren McCormack  
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| 43| Matthew Murphy  
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47  Louise Hickey  Processes of care and healthcare utilisation among patients with Type 2 diabetes attending general practice \(\text{p}32\)

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55  Mark Tully  A qualitative exploration of factors that promote sedentary behaviour and physical activity at work - what the GP should know \(\text{p}36\)

56  Fiona Magee  The undergraduate GP training environment - characteristics of one large network \(\text{p}36\)

59  Eoin Dunphy  End of life planning among frail patients in the General Practice setting using 'Think Ahead', an innovative end of Life Planning Tool \(\text{p}38\)

63  Claire Fitzsimmons  Screening for Chlamydia Trachomatis and Neisseria Gonorrhoea during routine smear testing in General Practice \(\text{p}40\)

64  Laura Daly  How global health partnerships are improving malaria management through mobile technology: a review of the literature \(\text{p}40\)
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1. **Does training improve the detection of adolescent depression in primary care? A structured literature review**

*O’Carroll J, W Cullen, D Swan*

**Introduction:** Though common and associated with adverse health and social outcomes, depression is often undetected by healthcare providers. GPs and primary care professionals (PCPs) are central to early identification of adolescent depression and education is likely to be an important strategy to achieve this. Our aim is to examine the effectiveness of education of GPs and PCPs in the diagnosis of depression in adolescents by conducting a systematic review of the relevant literature.

**Method:** We searched Pubmed to identify literature on education in primary care and its effect on the detection of depression in adolescents. Following ‘PRISMA’ guidelines, 12 studies were retained for qualitative synthesis. The educational intervention, author, year, location, outcome, study type, and key outcomes were tabulated. Articles meeting the following inclusion criteria were retained - studies including patients within the 13-17 adolescent age range; involving education; set within primary care; dealing with recognition of depression.

**Results:** There was a low yield of papers meeting our criteria. Most studies were before and after designs, however three RCTs were identified. Interventions were heterogeneous in type and duration of training received by healthcare professionals. The papers reported both positive and negative outcomes therefore it is unclear whether general training improves detection. However, focused training in one intervention e.g. the TIDY method was associated with better outcomes.

**Conclusion:** Although potentially an important strategy to identify adolescents with depression, there is little evidence to support the effectiveness of education of GPs; further research efforts should involve large scale trials of these interventions.

2. **GP attitudes towards screening and treating youth mental and substance use disorders in primary care**

*Leahy D, J Saunders, D Swan, D Meagher, F McNicholas, P Ryan & W Cullen*

**Introduction:** GPs have a crucial role in the identification and management of young people with mental and substance use disorders, including facilitating more timely intervention. As part of a programme to inform how primary care might better address youth mental health, this paper aims to determine current screening practices and explore GP attitudes in regards to potential interventions that facilitate the identification and treatment of mental and substance use disorders in young adults.

**Methods:** A cross-sectional survey of a national random sample of GPs (n=363) involving a study instrument informed by a narrative literature review and qualitative interviews with healthcare professionals and young people. All statistical analysis was performed using SPSS.

**Results:** We received 183 responses (50% response rate). While 133 (73%) of GPs reported their postgraduate training had adequately prepared them to deal with adult mental health problems, 29 (16%) and 37 (21%) indicated this was the case for child and adolescent mental health and substance use. Screening practices were significantly associated with gender, practice type and training satisfaction. Key barriers to treatment included: the attitude of patients / families, lack of specialist staff in the practice, poor service availability and lack of time. Access to services (66%), definitions of which interventions can be initiated in primary care (44%), appropriate time and space (47%) and access to a youth worker (42%) were the interventions most commonly identified to facilitate screening and treatment of mental and substance use disorders in general practice.

**Conclusions:** General practice is central to early intervention for youth mental health. Promoting awareness of mental health and the role of the GP in helping these issues, educating practitioners that includes specific training in youth mental and substance use disorders and improving access to psychological treatments are likely to be the key domains of such an intervention.
Collaborative medication review for multimorbid patients in general practice: design of an intervention using empirical data, theory of behavioural change and implementation science

Sinnott C, Bradley C, Byrne, M

Introduction: The lack of a theoretical basis is why many health care interventions fail or have limited practical value. Our aim was to design a theoretically based intervention to improve medication management in multimorbid patients in primary care.

Methods: The MRC guide to developing complex interventions was used as the overarching framework for intervention design. The initial three steps of this framework were followed, each of which involved multiple stages:
1. Identifying the evidence base
   • Systematic review of existing evidence
   • Generation of primary qualitative data
2. Identifying/developing theory
   Application of the following theoretical models to empirical data:
   • COM-B theoretical model of behaviour
   • Behavioural change wheel (BCW) of intervention functions
   • Taxonomy of behavioural change techniques (BCTs)
3. Modelling process and outcomes
   • Expert panel consensus process
   • Pilot study with GP trainees

Results: Numerous potential behavioural targets were identified in step 1. From these, the behaviour chosen was medication review of medications for multimorbid patients. Application of COM-B to empirical data highlighted reasons of capability, opportunity and motivation for why this behaviour (medication review) was not happening routinely. Extrapolating the findings of COM-B to the BCW showed that enablement, incentivisation and environmental re-structuring were likely to be important functions of a successful behavioural change intervention. The specific BCTs chosen included practical social support (two GPs to conduct review), restructuring the social environment (allocating time for review), uses of prompts/cues (prescribing tool), and incentivisation (professional development points). The implementation strategy was refined using the expert panel and pilot study.

Conclusion: Development of a behavioural change intervention and implementation strategy using frameworks of behaviour and behavioural change has resulted in a nuanced approach to changing GPs' practice. The resulting intervention is called 'Collaborative Medication Review for Multimorbidity in Primary Care' and is currently at feasibility testing stage.

Use of chart stimulated recall in qualitative interviews to understand decisions and actions in clinical practice

Sinnott C, Bradley CP

Introduction: Clinical decision-making requires the synthesis of information relating to disease, patients’ signs, symptoms and values, available treatment options, and community and health care resources. Research on clinical decision-making requires methods of data collection that are comprehensive enough to capture these diverse influences, yet are pragmatic and time efficient to secure the co-operation of busy practitioners. For this purpose, we have used a technique known as chart stimulated recall (CSR) in qualitative interviews. CSR involves use of a patients’ medical chart as an aide-memoire in the description of clinical encounters. It has been used widely in post-graduate medical education, where it is shown to be a valid way of assessing clinical decision-making. We aim here to provide an overview of its use in qualitative research.

Methods: Based on our experiences of conducting interviews using CSR and drawing on the wider literature, we summarize when researchers might find CSR useful, how to use the approach and what type of findings to expect.

Results: The use of CSR as a method in qualitative research is discussed in relation to participant recruitment, case selection, topic guides, data generation and analysis. We review the range of potential findings, including insights into the evolution of management over serial consultations, revelation of implicit influences in clinical care, demonstration of doctors’ educational needs and recommendations for service provision. We point out potential pitfalls to be avoided, ethical issues requiring consideration and future avenues of exploration. By comparing it to alternative approaches, we place CSR in the broader context of qualitative health research.

Discussion: We found CSR was acceptable to clinicians and provided important new insights into complex decision-making processes. By giving examples from the literature and our own examples, we provide guidance on the issues related to the application of CSR in qualitative exploration in healthcare.
**5** Psychosocial complexity in multimorbidity: the legacy of adverse childhood experiences

Sinnott C, McHugh S, Fitzgerald AP, Bradley CP, Kearney PM

**Introduction:** To effectively meet the healthcare needs of multimorbid patients, the most important psychosocial factors associated with multimorbidity must be discerned. Recently, the strong association between multimorbidity and psychosocial deprivation in adulthood has been shown. However, the relationship between multimorbidity and adverse psychosocial circumstances in childhood has not been explored. Our aim was to examine the association between multimorbidity and self-reported adverse childhood experiences (ACE), and the contribution of other social, behavioural and psychological factors to this relationship.

**Methods:** We analysed cross-sectional data from the Mitchelstown study, a population based cohort recruited from a large primary care centre. ACE was measured by self-report using the Centre for Disease Control ACE questionnaire. Multimorbidity status was categorized as 0, 1 or ≥2 chronic diseases, which were ascertained by self-report of doctor diagnosis. Ordinal logistic regression was used to calculate odds ratios (OR) and 95% confidence intervals (95%CI) for multimorbidity, using ACE as the independent variable with adjustment for social (education, public health cover), behavioural (smoking, exercise, diet, body mass index), and psychological factors (anxiety/depression scores).

**Results:** Of 2047 participants, 45.3% (n=927, 95%CI 43.1-47.4) reported multimorbidity. ACE was reported by 28.4% (n=248, 95%CI 25.3-31.3%) of multimorbid participants, 21% (n=113, 95%CI 18.0-25.1%) of single chronic disease participants, and 16% (n=83, 95%CI 13.2-19.7%) of those without chronic disease. The OR for multimorbidity with any history of ACE was 1.6 (95%CI 1.4-2.0, p<0.001). Adjusting for social, behavioural and psychological factors only marginally ameliorated this association, OR 1.4 (95%CI 1.1-1.7, p=0.002).

**Conclusions:** Multimorbidity is independently associated with a history of adverse childhood experiences. These findings contribute to the emerging understanding of the psychosocial complexity evident in people diagnosed with multiple chronic diseases. This information should be used to inform the development of health care interventions and the provision of person centred care in multimorbid patients.

**6** Reflections on the use of participatory research methods to include stroke survivors and primary care professionals as co-researchers in the evaluation of a primary care intervention

McMenamin R, Tierney E, MacFarlane A

**Introduction:** Approximately 176,000 people in the UK and Ireland are diagnosed with stroke annually with up to one third experiencing aphasia. Stroke survivors with aphasia experience complex communication and psychosocial consequences necessitating interventions from General Practitioners and primary healthcare professionals. In keeping with policy imperatives for service user involvement stroke survivors have been included in primary care research. However People with Aphasia (PWA) are frequently excluded because of their communication disability. Our knowledge about the healthcare experiences of PWA compared to the general stroke population remains limited. This paper reports on: 1) the use of Participatory Learning and Action (PLA) research to include PWA in Primary Care research and 2) PWA’ evaluations of the process.

**Methods:** This qualitative study involved the generation and analysis of data through PLA methods. Using purposeful sampling participants [PWA (n=5); Primary healthcare professionals (n=5); and students (n=9)] engaged in the multi-perspectival evaluation of a Primary Care aphasia intervention. Following a pilot study, co-researchers’ perspectives were captured across individual and inter-stakeholder data generation episodes (n=18) using selected PLA techniques. Thematic analysis guided the co-analysis of data and transferability of findings was explored.

**Results:** PWA and primary healthcare professionals were successfully included in primary care research using a PLA approach. The democratic and communicative accessibility of PLA methods resulted in the co-creation of agreed evaluation criteria for a primary care aphasia intervention. Data on PWA’ evaluations of acting as co-researchers indicated positive transformative changes related to issues of identity, independence and confidence.

**Conclusions:** This study provides the first empirical evidence of the successful use of PLA as a methodological approach to include PWA and primary healthcare professionals in qualitative primary care research. Findings will be of interest to healthcare professionals and to those exploring innovative methodologies to meaningfully include under-represented groups in health research.
The extent to which the Lifestyle and Health behaviours of GP’s in the West of Ireland influences health promotion practice with their patients

Walsh T, Egan A, Healy P

Introduction: Doctors’ health is important and can potentially impact on the health of patients. Doctors practicing healthy behaviours counsel patients more frequently and effectively and serve as credible health role models. The aim of this study is to establish the lifestyle and health behaviours of GP’s, their health promotion practices and determine if there is a relationship between the two.

Methods: This study is an anonymous, quantitative cross-sectional postal survey. Data were analysed using Gnu-PSPP.

Results: N= 91, 33% response rate. 75% (n=68) of GP’s report they are in good health. 59% (n=54) comply with WHO recommendations for exercise. 5% (n=4) are current smokers, while alcohol is consumed on average 7 days per month. Only 59% (n=54) have their own GP and 62% (n=56) receive the flu vaccine. 95% (n=86) rate preventive counselling as important, with the majority of GP’s counselling patients about diet 82% (n=75), exercise 78% (n=71), and smoking cessation 81% (n=74) daily. GP’s report high levels of confidence in their counselling practices. Up to 82% feel that their own behaviours impact on preventive counselling. As the BMI of GPs increases, the frequency of diet counselling decreases, p= 0.035. Common barriers to health promotion were lack of time, compensation and patient interest.

Conclusions: GPs perceive themselves to be healthy, data suggests here is scope for improvement in GPs’ self-care. Most GPs believe preventive counselling is important. GPs perceive that self-behaviour impacted strongly on their counselling practices. GPs are confident in their ability to counsel patients and do so frequently. Significant barriers to health promotion exist which need to be addressed to improve patient care.

Supporting Caregivers in Low and Middle Income Countries to make an Informed Decision regarding Child Consent

O’Connor Y, Nyirongo D, Heavin C, Gallager J, O’Connor S, O’Donoghue J

Introduction: Informed consent is a fundamental requirement of clinical research. This is particularly important for those in vulnerable groups, such as children, where informed consent must be sought from a legally authorised representative. There remains a dearth of research focused on obtaining consent from caregivers in Low to Middle Income Countries (LMIC) particularly in the burgeoning area of mobile Health (mHealth). In this study we sought to understand the barriers and facilitators for caregivers in providing consent for children to participate in a mHealth pilot study in Africa.

Methods: A qualitative case study of caregivers in Malawi, Africa was undertaken during October 2014. Interviews (n = 10) were performed in the local dialect of Tumbuku in the caregivers’ home in Mzimba North with the assistance of our Malawian partners and local Community Health Workers. Data was analysed using grounded theory coding techniques (open, axial and selective).

Results: A caregivers perceptions of experimentation, chance allocation, innovation, technology trust, net benefits and uncertainty costs (i.e. compared with the status-quo) does influence their decision making process. Net benefits and innovation were found to positively impact a caregivers’ decision while the remaining factors could contribute to caregivers refusing consent.

Conclusions: The last decade has witnessed a surge in the development of new mobile applications targeted at sick children in LMIC. Understanding the factors which impede and/or facilitate a caregiver’s decision making process when considering to provide consent for children to participate in mHealth trial scenarios is imperative to improve patient recruitment. Due to a lack of knowledge from the caregivers’ perspective surrounding mHealth based trials it is essential that caregivers are educated about such studies. Furthermore caregivers should be informed about the potential improvements in the availability, efficiency and effectiveness of health services to enable informed consent to be obtained appropriately.
Psychosocial aspects of epilepsy in Ireland: a qualitative study of patient experience


Introduction

Epilepsy is a stigmatizing chronic disease that is associated with considerable psychosocial burden.

Methods

This study sought to evaluate the emotional and psychosocial impacts of living with epilepsy by conducting semi-structured interviews with a purposive sample of 12 people with epilepsy (9 female, 3 male, mean age 35 years), recruited from General Practice. Thematic analysis identified inter-related key themes: fear of seizures, rejection, embarrassment and stigma.

Results

We identified considerable overlap between feelings of fear and perceived stigma, issues affecting adherence with medication, and perceptions regarding side effects and prescribing choices. There was also a relationship between feelings of stigma, need for secrecy and feelings of discrimination. Many experienced feelings of guilt and being a burden to their families. There was limited independence, compounded by driving restrictions and frustration with perceived and real barriers to achieving academic and professional goals.

Conclusions

Our study provides several insights into the emotional and psychological aspects of living with epilepsy.

Interventions to address potentially inappropriate prescribing in primary care: a systematic review of randomised control trials

Clyne B, Fitzgerald C, Quinlan A, Hardy C, Galvin R, Fahey T, Smith SM

Introduction: Potentially inappropriate prescribing (PIP) contributes to increased morbidity, adverse drug events and hospitalisations. The prevalence of PIP ranges from 20 to 50% in community dwelling older adults. This systematic review aimed to assess the effectiveness of interventions designed to reduce PIP in primary care.

Methods: PubMed, Embase, Scopus and the Cochrane library databases were searched (June 2014). Search terms included inappropriate prescribing, inappropriate pharmacotherapy, RCT, and primary care. Studies were included where: population was community dwelling older patients (≥65); intervention targeted PIP as compared to usual care or other intervention; and the outcome was change in PIP. PIP changes were measured with explicit (criterion-based, e.g. Beers or STOPP criteria) or implicit (judgment-based) tools such as the Medicines Appropriateness Index (MAI) which measures appropriateness across ten domains summed to provide a score. Data extraction and methodological quality assessment were conducted independently. Owing to study heterogeneity, a narrative synthesis was carried out.

Results: 14 RCTs were identified using five intervention strategies: pharmacist interventions; multi-disciplinary team (MDT) meetings; multifaceted interventions (combining two or more techniques); computerised clinical decision support systems (CDSSs); and audit and feedback. Pharmacist interventions (five studies) were associated with improvement in PIP. Significant improvement in diminishing PIP was also found in two out of three multifaceted interventions. CDSSs studies were effective in reducing new PIP but not in the discontinuation of existing PIP. The methodological quality of the included studies was often poor, particularly in reporting selection bias and attrition bias. There were small numbers of studies within each category and there was considerable heterogeneity in the types of interventions grouped together and PIP measurement.

Conclusions: Pharmacist interventions appear effective in decreasing PIP in primary care, as do multifaceted approaches and CDSSs. However, the variable methodological quality of these RCTs mean that results require further confirmation in ongoing RCTs to produce better quality evidence.
Examining the gap between evidence based guidelines and statin utilisation in community living adults at high risk of cardiovascular disease mortality: evidence from The Irish Longitudinal Study on Ageing

Murphy C, Bennett K, Shelley E, Graham I, Fahey T, Kenny RA

Introduction: This study aims to examine the extent to which statins are used by adults at high risk of cardiovascular disease (CVD) compared to European clinical guidelines. The high risk groups examined are those with a) a history of CVD, b) diabetes and c) a high or very high risk of CVD mortality (≥5%) based on the Systematic COronary Risk Evaluation (SCORE). European guidelines on cardiovascular disease prevention in clinical practice including the management of dyslipidaemia were published in 2007 and updated in 2012.

Methods: The study is cross-sectional in design using data from the first wave (2009-2011) of The Irish Longitudinal Study on Ageing (TILDA). The sample (n=3385) is representative of community living adults aged 50-64 years in Ireland.

Results: Statins were used by 68.8% (95% CI 61.7%-75.9%) of those with a history of CVD, 57.4% (95% CI 49.1%-65.7%) of those with diabetes and by 19.0% (95% CI 12.6%-25.4%) of adults with a SCORE risk ≥5%.

Over a third (38.9%) of those with a history of CVD, 46.8% of those with diabetes and 85.7% of those with a SCORE risk ≥5% were at or above the low-density lipoprotein cholesterol (LDL-C) target of 2.5 mmol/L specified in the 2007 European guidelines.

Conclusions: Despite strong evidence and clinical guidelines recommending the use of statins for secondary prevention, a gap exists between guidelines and statin utilisation in Ireland in this community living cohort. It is also of concern that such a low proportion of asymptomatic adults with a SCORE risk ≥5% were taking statins. A policy response that strengthens secondary prevention and improves risk assessment and guideline implementation in the primary prevention of CVD is required.

Should GPs target Physical Activity counselling for patients with long-standing illness or disability?

Heron N, Cupples ME, Kee F, Tully MA

Introduction: Guidelines for the prevention and management of many chronic diseases recommend that General Practitioners (GPs) should encourage patients to be physically active. However, people with long-standing illness or disability tend to be less active and are less likely to participate in sport than the general population but whether their lack of sport participation is associated with factors other than their physical well-being is unknown. This study aimed to identify sport participation levels and their correlates, for adults with long standing illness or disability.

Methods: We extracted data from the Continuous Household Survey, an annual survey of a random sample of the Northern Ireland population for the four years from 2007/8 to 2010/11 and examined responses for the total sample, those with a long-term illness or disability and those with no long-term health issues. We conducted uni-variate binary regression analysis for the whole sample and those with long-standing illness or disability, using sport participation as the dependent variable and then carried significant variables into a multi-variate analysis.

Results: The sample included 13,683 adults; 3550(26%) reported long-term illness or disability. Multi-variate analysis showed that, for the total sample and for those with long-standing illness or disability, sport participation correlated positively with being male, aged <56 years, having a household car/van, health being ‘fairly good’/’good’ in the previous year, doing work, and living in an urban location. Also, for those with long-standing illness or disability, being single and less socio-economically deprived correlated positively with sport participation.

Conclusions: The findings suggest that focused efforts may promote sport participation for people with long-standing illness or disability who are older, female, married, socio-economically deprived, live rurally and report poor health. Whilst there may be additional predictors of physical activity for these people, this information may prompt GPs to target counselling of their patients and help improve health outcomes.
Primary Care Reform in Ireland: health professionals’ perceptions of progress with PCT implementation in Ireland

Tierney E, O’Sullivan M, Hannigan A, Hickey L, Cullen W, Kennedy N, MacFarlane A

Introduction: Internationally, primary care is the cornerstone of healthcare planning and reform with an emphasis on improving multidisciplinary primary care team (PCT) working. The importance of PCTs for Ireland was emphasized in the Health Service Executive’s 2001 Primary Care Strategy. While pockets of good practice exist, there is also evidence of barriers to implementation. However, there is a lack of research involving all relevant stakeholders regarding the implementation process of PCTs. This study aims to explore perceptions of progress from the perspective of all stakeholders.

Methods: An online survey was used to explore health professionals’ perceptions of progress with PCT implementation in Ireland. After pilot work, snowball sampling was used to administer the survey to HSE staff in PCTs across three of the four HSE regions and GPs (N=2408). The survey followed an adapted Dillman Total Design Survey Methodology. Statistical analysis was conducted using SPSS.

Results: Respondents (n=569 representing a response rate of 23.6% across all disciplines viewed multidisciplinary working as important. Most disciplines viewed the progress of implementation of PCTs as poor. Factors considered to be most important for team members to work effectively were (1) resources (2) GP participation (3) leadership and (4) communication. Waiting list system and community participation were considered the least important factors across all disciplines. Resources rated as very important to work effectively as a team were; protected time for meetings and capacity to manage workload. Payment for attending meetings was not considered important by most disciplines apart from GPs who rated it as important.

Conclusions: This study provides the first empirical data on professionals’ perceptions and experiences of PCT implementation from a range of discipline perspectives. The slow progression of PCTs implementation is highlighted across disciplines and the factors that will promote the effectiveness of team working across all stakeholders are outlined.

Cross-sectional survey of general practitioners’ and community pharmacists’ opinions on medication management at transitions of care in Ireland


Introduction: Prescribing is one of the most frequent interventions. Despite this, errors are common and occur frequently at transitions of care. There is a lack of national data on the opinions of community healthcare providers on medication management between secondary and primary care. The overall aim of this study was to gather information from general practitioners (GPs) and community pharmacists (CPs) on current practices of medication management, specifically medication reconciliation as patients transition in care.

Methods: An electronic survey was distributed to 2675 GPs and GP Registrars as well as 2382 CPs. A working group of experts, drawn from practicing GPs and pharmacists, devised the items within the questionnaire. Specific areas addressed included electronic communication, computerised prescribing records, handling of actual and potential prescribing errors and personal professional experiences of critical incidents arising from possible communication errors.

Results: There was an overall response rate of 20 % (1014 respondents - 554 GPs/Registrars and 460 CPs). >90% of GPs and CPs use computerized prescribing. 35% of GPs reported receiving electronic communications from hospitals, with 60% having no formal system of medication reconciliation. Both groups reported a positive relationship with each other (62% of GPs and 52% of CPs describing it as very good) but had more mixed views when asked about the relationship with secondary care. CPs (86%) and GPs (87%) were in favour of expanding the role for hospital pharmacists in identifying and preventing prescribing errors. Alarmingly >80% of both groups could clearly recall prescribing errors they had witnessed. Thematic analysis underlined the positive relationship between GPs and CPs, a possible greater role for hospital pharmacists, lack of ICT interoperability, vulnerable patients, poor communication between HCPs and frustrations with unclear lines of responsibility.

Conclusions: Poor inter professional communication and medication errors are features of the primary/secondary care transition. There is a clear need for an improved medication management system.
16 Prescribing error at the interface of primary and secondary care


Introduction: Prescribing error occurring during transitional care, particularly at time of discharge from hospital, is a significant source of preventable morbidity and mortality among patients. The timing and origin of errors present at discharge is unclear as prescribing and medication transcription occur at many points throughout the inpatient stay. The aims of this study were to identify prescribing errors occurring at hospital discharge and to examine inpatient medication information for discrepancies.

Methods: This study was conducted in two parts: Firstly: An audit of duplicate discharge prescriptions which assessed; legibility; compliance with legal requirements and drug interactions. Secondly: A review of all sources of medication information for 15 inpatients to identify unintentional prescription discrepancies, defined as: “undocumented and / or unjustified medication alteration” throughout the hospital stay. Microsoft Excel was used for data analysis. Local Ethics Committee approval was granted.

Results: Part 1: Of the 6057 prescribed items; 52 (<1%) were deemed illegible. Of the Controlled Drug prescriptions only 11.1 % (n=167) met all of the legal requirements. More than 1 in 5 patients (21.9%) received a prescription containing a drug interaction. Part 2: Having reviewed medication information 175 discrepancies were identified; of which 78 were deemed unintentional. Of these: 10.2% (n=8) occurred at the point of admission whereby 76.9% (n=60) occurred at the point of discharge.

Conclusions: The study identified the time of discharge as a point at which prescribing errors are likely to occur. This has implications for patient safety and provider work load in both primary and secondary care. Enhanced use of pre admission medication information as well as educational initiatives may have a role in ameliorating the situation.

17 Impact analysis of clinical prediction rules in primary care: a review


Introduction: Following development and appropriate validation, clinical prediction rules (CPRs) should undergo impact analysis to evaluate their effect on patient care. This review aims to describe and critically appraise impact analysis studies identified during the development of a CPR register for primary care.

Methods: Search strategy: A CPR search string developed in-house was applied to 30 pre-selected journals on MEDLINE (1965-2013). Inclusion criteria: i) Study setting relevant to primary care, ii) Implemented CPR compared to usual care, iii) Primary outcome: process of care and/or patient outcomes, iv) Study design: randomized controlled trial (RCT), (controlled) before-after and interrupted time-series. Analysis: A narrative analysis was performed including; clinical domain (ICPC2), setting, study design, primary outcome, and consideration of barriers to implementation. Methodological quality assessment was performed using the appropriate tool according to study design.

Results: A total of 48 studies, incorporating 29 unique CPRs, were included. The main study design was RCT (n=32). The most common clinical domains were cardiovascular (n=18) and musculoskeletal (n=12). Process of care was the most frequent primary outcome (n=26) followed by combined process/patient outcomes (n=12) and patient outcomes (n=10). Seven CPRs had not been broadly validated pre impact analysis. Nineteen studies implemented the CPR alone and the remainder as part of a broader guideline/protocol. Compared to usual care, 33 studies (68%) demonstrated an improvement in primary outcome with CPR implementation. Only 17 studies assessed barriers prior to implementation and methodological quality of studies was often poor, particularly in reporting selection bias and blinding.

Conclusions: Impact analysis of CPRs in primary care has focused on a small number of CPRs across few clinical domains. CPRs are more likely to be evaluated as part of broader guideline or protocol implementation. Two-thirds of studies demonstrated improvements in primary outcome, most often process of care, following CPR implementation.
There is nothing as practical as a good theory: Using Normalisation Process Theory to develop a practice resource for supporting the implementation of Community Participation in Primary Healthcare

MacFarlane A, Tierney E, McEvoy R

Introduction: Bridging the research to practice gap is a problem in primary healthcare. The use of theory to inform studies to address translational gaps is strongly recommended. There are a range of theories available for use. These have mainly been used to guide analyses in implementation research but have not been used to inform the development of a practical resource for supporting implementation. This paper describes the processes by which we used Normalisation Process Theory (NPT) to develop a practical guide for community and health service stakeholders to support the implementation of Community Participation in Primary Healthcare

Methods: Between 2010-2014 we used NPT’s four constructs to inform the analysis of qualitative data from a multi-perspectival stakeholder group about levers and barriers to Community Participation in Primary Healthcare. Following the principles of the AGREE framework, we developed a guide in two parts with information on (i) findings and a set of practical and interactive exercises per NPT construct to support implementation work and (ii) the research process. This was circulated to an expert panel (n=8) from diverse backgrounds and at a community consultation event (n= 50) for critical analysis before final editing.

Results: It was effective to use the AGREE framework to support the translation of an NPT analysis into a practical guide. The framework provided a clear structure for managing a large volume of material about methods and results. It was challenging, but possible, to translate the NPT analysis into accessible narratives and exercises. Feedback from the expert panel and community was positive and offered ideas for improving the presentation of material and the clarity of specific activities.

Conclusions: This novel use of NPT in implementation research demonstrates a process by which a theory can be translated into an accessible and practical resource for stakeholders from community and health service settings.

Type 2 Diabetes Mellitus: Patient Characteristics at Initial Diagnosis

Scanlon L, Murphy K, Moran C, Bradley C, Moran J

Introduction: The incidence and prevalence Type 2 Diabetes Mellitus (T2DM) is increasing. Diabetes in General Practice (DiGP) is an educational forum for Irish General Practices aiming to improve their care of patients with T2DM. We investigated the characteristics of T2DM patients at initial diagnosis and whether patients cared for in DiGP practices had better glycaemic control (lower HbA1c) at the time of diagnosis than patients attending non-DiGP practices.

Methods: 22 General Practices from the South West of Ireland were recruited over a 6 week period, including 15 DiGP practices and 7 non-DiGP practices. A random selection of T2DM patients (N=460) were selected and their records were analysed. Demographics, smoking status, BMI (Body Mass Index) and HbA1c values at the time of initial diagnosis were recorded.

Results: Smoking status was recorded for 41% of patients, with 38% reported as current or ex-smokers and 62% reported as non-smokers. BMI was recorded in 47% of patients, with 10% of patients “underweight” or “normal” and 28% “overweight” and 63% considered “obese”. There was a significant negative correlation between HbA1c at initial diagnosis and patient age (r=−0.203, p=0.00). There was a significant correlation between HbA1c at initial diagnosis and positive smoking status (r=0.204, p=0.005). There was no significant correlation between HbA1c at diagnosis and either BMI or DiGP membership.

Conclusions: HbA1c level at initial diagnosis is higher in younger adults diagnosed with T2DM. This highlights the need for increased diagnostic suspicion in this patient group. Positive smoking status is associated with higher HbA1c level at initial diagnosis, highlighting the need for increased awareness of T2DM in smokers. Membership of DiGP did not lead to earlier diagnosis of T2DM.
Measurement of Paediatric Blood Pressure in Primary Care, A Cross Sectional Quantitative Survey of Current Practice

Kelly D, Delaney D, Ni Churrain V

Introduction: Paediatric hypertension is becoming more common, especially with the increasing incidence of childhood obesity. International guidelines advocate screening for hypertension in children. There is a paucity of research exploring the barriers to measuring blood pressure in children in primary care. Our aim is to establish current practice with respect to measurement of blood pressure in the paediatric population by GPs in the West of Ireland and ascertain GP’s opinions on potential barriers to measuring BP in a paediatric patients.

Methods: An anonymous quantitative, cross-sectional postal survey was sent to GPs in the West of Ireland. Data analysis was conducted using PSPP software. We report descriptive statistics and content analysis of free text comments.

Results: Response rate 33% (n=92). 25% (n=23) had measured paediatric BP within the last three months, 47% (n=43) in the last six months and 84% (n=77) within the last year. 44% (n=40) had neither infant nor a childrens’ BP cuff available at their practice. 25% (n=23) reported not being confident in measuring childrens’ BP. Key obstacles preventing the checking of BP were equipment availability, time constraints and lack of appreciation of the prevalence of hypertension in children.

Conclusions: This study shows that paediatric BP is not routinely measured in practice. While the newer guidelines recommend measuring paediatric BP, obstacles in practice include a lack of suitable BP measuring equipment as well as low confidence in performing and interpreting paediatric BP measurements. Until obstacles are understood, and adequate supports put in place, Irish GPs may not be in a position to adopt current guidelines.

Experiences of a complex intervention to identify/treat alcohol use disorders (AUDs) among patients receiving opiate treatment services in primary care settings in Ireland. A qualitative study of patients’ experiences


Introduction: Alcohol use disorders (AUDs) are common and associated with considerable adverse outcomes among patients receiving opiate treatment services in primary care in Ireland and other European countries. This presentation uses qualitative data collected from patients on methadone maintenance therapy to highlight their experiences of, and attitudes towards screening and therapeutic interventions for AUDs.

Methods: Qualitative data was collected from 14 patients across 13 methadone prescribing general practices in Ireland’s HSE Midwest, and Dublin Mid-Leinster regions. Six of the practice GPs (intervention group) had received a complex intervention training session relating to SBIRT (Screening, Brief Intervention and Referral to Treatment). The qualitative data was collected through semi-structured interviews three months after the SBIRT training. Data was analysed using a thematic analysis and purposive sampling until theoretical saturation had been reached.

Results: Three key themes were identified from the data, 1) Patients’ experience of screening and treatment for AUDs in primary care. 2) Barriers to discussing alcohol consumption with their GP. 3) Patients’ attitudes towards alcohol. While most patients acknowledged that they had discussed their alcohol consumption with their GP at some stage, only four patients claimed they had been screened using the AUDIT questionnaire by their GP during the last three months. Patients who admitted having concerns regarding their alcohol consumption stated that the risk of having their methadone dose reduced was a barrier to talking openly to their GP about their alcohol use.

Conclusions: AUDs are a significant concern in the care of patients receiving opiate treatment services. As such interventions which promote regular screening and brief intervention in primary care are important for this at risk group. The data from the current study reveals that many GPs do not regularly screen patients. Further research into the reasons why GPs do not regularly screen this cohort of patients would be a welcome addition to the literature.
Results from the SIMPle study; a cluster randomised intervention to improve the quality of antimicrobial prescribing for UTI in general practice

Vellinga A, Duane S, Galvin S, Callan A, Murphy AW and the SIMPle team

Introduction: Antibiotic resistance poses a threat to our healthcare system. Improving antibiotic prescribing can contribute to addressing this problem. A multidisciplinary team from epidemiology, social marketing, health economy and microbiology developed an intervention in primary care to improve the quality and quantity of antibiotic prescribing for urinary tract infections (UTIs).

Methods: The SIMPle study offers GPs interactive workshops, audit and feedback reports and automated electronic prompts summarising recommended first line antibiotic treatment and, in a third intervention arm, provide GPs with tools to improve communication to promote delayed antibiotic prescribing. Novel data collection methods include text messaging, a smart phone app and remote data extraction from the GP practice software.

Results: In an adjusted mixed model the effect of the intervention was an overall increase of 2.3 (1.7-3.2) in prescribing a first line antimicrobial in the intervention compared to the control. The odds ratio was slightly higher in arm A (2.7 (1.8-4.1)) than in arm B (1.9 (1.3-2.9)). Considering the relatively high prevalence of trimethoprim resistance in the area, nitrofurantoin was highlighted as the preferred first line treatment during the workshop and the odds of a prescription for nitrofurantoin was 4.5 (2.7-7.3) in arm A and 3.5 (1.9-6.3) in arm B. Prescribing of nitrofurantoin for UTI was at the expense of trimethoprim and to a lesser extent, co-amoxiclav and quinolones. However, an unintended increase in antimicrobial prescribing for UTI was observed in the intervention arms compared to control (OR 2.2 (1.2-4.0) in arm A and 1.4 (0.9-2.1) in arm B. The effect of the intervention showed to be sustained 5 months after the end of the intervention.

Conclusions: The SIMPle study, a complex intervention including audit and feedback reports combined with reminders increase the quality of prescribing for UTI in Irish general practice.

The Effectiveness of Primary Care Teams on Improving Patient, Professional and Healthcare System Outcomes: A Review of the Evidence

King R, Hannigan A, O'Sullivan M, Cullen W, O'Reilly P, Kennedy C, Lee S, McFarlane A

Introduction: The quality of primary care in Ireland directly correlates with the strength of our healthcare system as a whole. In order to meet the health and well being needs of the population, it is recommended that professionals from all disciplines collaborate so as to ensure the best possible outcomes for patients and healthcare providers alike. The aim of this review is to search and synthesize the existing evidence on interventions involving multidisciplinary primary care teams.

Methods: An online database of Cochrane systematic reviews was searched for relevant reviews, using search terms based on the MESH headings ‘Patient Care Team’ and ‘Primary Health Care’. A standard reporting tool was used to extract information from the reviews including the number and design of the studies included, outcomes of interest, type of interventions, quality of the evidence and overall conclusions.

Results: Out of the 168 reviews identified by the search terms, 5 were relevant. Included in these reviews were 78 individual studies and 68,002 patients. The majority of studies were randomized controlled trials. Each review examined the role of the primary care team for different patient subgroups, for example in the management of patients with multimorbidity. The outcomes of each review were recorded. Overall, the involvement of a primary care team in patient management resulted in better patient outcomes, for example improved functional ability of patients.

Conclusions: Interventions carried out by multidisciplinary primary care teams have demonstrated their effectiveness in the management of patients with specific conditions. However, a wider search and review of research on how primary care teams can benefit the general population is required.
Optimising mental disorders treatment in primary care: Development and implementation of a reporting function within electronic medical records.

Swan D, Hannigan A, Higgins S, McDonnell R, Meagher D, Cullen W

Introduction: As in many other healthcare systems, mental health service provision is currently being reconfigured in Ireland, with a move towards more care provided in the community. However, there is little systematic data on the prevalence and profile of mental health problems among patients in general practice in Ireland which can guide service-related changes. This paper describes the development and piloting of a software tool within a widely-used GP practice information system to improve data collection on mental disorders among patients attending general practice in Ireland.

Methods: In collaboration with the Irish Primary Care Research Network (IPCRN), we developed a 'Mental Health Finder Tool' within a GP practice information system to enable GPs identify patients with a range of common mental disorders, including: depression, panic/anxiety, somatoform disorders, eating disorders, cognitive disorders, and alcohol and substance use disorders. The tool was piloted among a convenience sample of six GP practices affiliated with UL Graduate Entry Medical School.

Results: The finder generates a report listing all patients with each condition, as identified by a) the presence of a relevant ICPC2/ICD10 code, b) medication prescribed. For each case, the report contains additional data on age, gender, GMS status. The total 'active' patient population in the six practices was 44,756 (46% male; 31% GMS). The prevalence of mental health and substance use problems across the six practices, as identified by the finder, was 9.43% (range 6.93% to 12.69%). 38% of identified patients were male; 74% were GMS eligible. One-third (33%) of identified patients were prescribed more than one ATC class of psychotropic medication. Data on age profile and type of psychological morbidity among identified patients will also be presented.

Conclusions: The introduction of a mental health finder within a widely-used GP practice information system will enhance primary care-based mental health research in Ireland.

‘Simple Steps’ – a general practice based physical activity intervention for pregnant women

Brennan M, Cupples ME, Reid V, Tully MA

Introduction: Gestational weight gain is an independent contributory factor to the global problem of obesity. Previous studies, mostly in secondary care, suggest that physical activity (PA) interventions in pregnancy help women manage their weight gain but evidence regarding the most effective approach is unclear. Obstetric care is increasingly being delivered in primary care, so we sought to determine the feasibility of conducting a randomised controlled trial to evaluate a general practice based PA intervention in pregnancy.

Methods: In 4 different general practices, we sought to recruit women <14 weeks pregnant, with a BMI of 18.5-39.5. Baseline PA was assessed by questionnaire and accelerometer data before allocating participants randomly to an intervention (pedometer and step-count diary) or a control group. For both groups, PA was reassessed after 12 weeks and study feedback questionnaires were completed. We conducted semi-structured interviews (5 GPs and one midwife involved in recruitment; 30 women attending primary care antenatal clinics), to explore views regarding PA interventions in pregnancy and analysed these using a thematic framework.

Results: During the recruitment period (21.7.14-31.10.14) 34 women were eligible to participate in one practice but only 20 were consented to contact (58%). Attempts to contact 14 of these were unsuccessful; 6 were recruited, including 2 subsequent drop-outs. No women were recruited from the other practices. Perceived barriers to engagement in a PA intervention included time, work commitments, other children and a perception that PA was harmful in pregnancy.

Conclusions: These findings indicate that the delivery of a pedometer based intervention to promote PA among pregnant women in primary care is not feasible. Major barriers to this included women’s prioritisation of the demands of their everyday lives. Further research on the best approaches to gestational weight gain management should explore alternative interventions, possibly before pregnancy or in settings other than primary care.
Factors associated with early death in colon cancer: A nested case control study in a UK region

Hart N, Donnelly C, Anderson L, Donnelly M, Gavin A

Introduction: Population level studies of colon cancer survival have identified the first three months following diagnosis as critical in explaining international survival variation and survival differences between socio-economic groups in the UK. Not enough is known about the contributing factors for death in this early phase after diagnosis.

Methods: This retrospective nested case-control study collected GP and hospital data on 1,000 colon cancer patients who survived less than 3 months from diagnosis (cases) to patients with survival greater than 6 months and less than 3 years (controls). Patients were matched by age, sex and year of diagnosis. A range of patient, disease, clinical and service characteristics were investigated including the time and pathway to diagnosis, number of service visits, treatment, co-morbidity and health seeking behaviours (e.g. uptake of flu vaccine), to identify population sub-groups who are more likely to die early with the ultimate aim of earlier interventions with such groups.

Results: The mean age of patients that died within 3 months of diagnosis was 74.4 yrs (70.8 yrs for all colon cancer patients) and 52% were male (51.8% for all colon cancer patients). Being single, widowed, having an unknown marital status and increasing deprivation were associated with early death. While number of consultations (1-3 yrs pre-diagnosis) was not associated with early death, attendance for flu vaccine had a negative association (OR=0.62, CI:0.42-0.92). Increasing number of GP consultations in the 3 months before diagnosis was associated with early death (OR=1.16, CI:1.09-1.22) as was increasing out of hours appointments (OR=1.24, CI:1.11-1.41) and emergency presentations (OR=1.17, CI:1.06-1.29).

Conclusion: This study presents important insights into the pathway to diagnosis for patients with the poorest survival as well as identifying characteristics of patients most likely to experience an early death. Further work on the role of symptom profile of patients and possible drivers of variation in patient pathways will be presented and discussed.

Baseline analysis of primary care requesting patterns for Immunoglobulins (Ig) in the Cork-Kerry region: a cross sectional study

Cadogan SL, Browne JP, Bradley CP, Cahill MR

Introduction: Each year, approximately 76 million laboratory tests are analysed in Ireland. General practitioners (GPs) are responsible for up to 50% of these requests, yet no studies to date have examined their requesting patterns. The aim of this descriptive research was to identify the initial rate of Immunoglobulin (Ig) requested by GPs in South-West region (Cork-Kerry) of Ireland in 2013, analysing the abnormal test results. A secondary objective was to assess the variation in requesting patterns between GPs and within practices.

Methods: Cross-sectional analysis of routine laboratory data on Ig requests by 489 GPs using the laboratories in the Cork-Kerry region. Data were extracted for 2013 using the hospital's Cognos impromptu system to interrogate APEX laboratory system. Data were exported, cleaned and statistical analysis including frequencies and cross tabs were performed using Stata v12.

Results: In 2013, the CUH analysed over 19,000 GP-requested Ig tests (IgA, IgG and IgM) for approximately 6,000 primary care patients. Of the IgA tests, 84% were normal, 4% low abnormal and 12% high abnormal. Of the IgG tests, 92% were normal, 2% low abnormal and 6% high abnormal. Of the IgM tests, 80% were normal, 12% low abnormal and 8% high abnormal. Requesting volumes per GP ranged from 1 to 1,588 tests/year. The highest requesting practice accounted for over 25% of requests (2,076 tests between 11 GPs in one practice), with one GP requesting over 75% (1,588) of these tests.

Conclusions: Variation exists in requests patterns for Igs both at at practice level and a GP level. Results show a variable requesting pattern unlikely to be related to level of probable underlying pathology. This presents an opportunity to develop an intervention to improve laboratory testing in the baseline requesting patterns.
Testing times ahead: a systematic review of interventions for improving primary care laboratory use of haematological tests

Cadogan SL, Browne JP, Bradley CP, Cahill MR

Introduction: Laboratory testing is an integral part of day-to-day primary care practice underlying approximately 70% of diagnoses and treatment decisions. Research suggests that a large proportion of requests are avoidable. The aim of this systematic review was to comprehensively search the literature for studies evaluating the effectiveness of interventions for improving general practitioners (GPs) laboratory use.

Methods: PubMed, Cochrane Library, Embase and SCOPUS (from inception to 09/02/14) were searched using the relevant search terms. Systematic reviews, randomised controlled trials, controlled clinical trials, controlled before and after studies and interrupted time series analysis of interventions objectively (volume of tests) assessing Primary Care requesting patterns were considered for inclusion. Studies were only considered if participants were primary care physicians. Quality and risk of bias was assessed using a modified version of EPOC Data Collection Checklist and Quality Criteria.

Results: In total, 6,166 titles and abstracts were reviewed, followed by the review of 87 full texts. Of these, 11 papers were deemed eligible for inclusion in the systematic review. Due to heterogeneity, results could not be meta-analysed. All, but one intervention significantly reduced the volume of test requests. The reduction of test requests resulting from the interventions varied from 5% to 60%. Feedback and education based interventions proved most effective for changing GP requesting behaviour. However, the complex health systems of included studies indicate further qualitative research is required prior to developing an intervention.

Conclusions: Each type of intervention (education, feedback, cost displays and guidelines) may improve laboratory use among GPs. However, quality of studies and heterogeneity between results indicates further research is needed.

The road to general practice: constructing professional identity in GP training

Johnston J, Donnelly M, Monrouxe L, Gormley G

Introduction: Trainees in UK general practice are unique amongst junior doctors, in that they spend the majority of their training time working in a different context to their eventual destination. Furthermore, they undergo frequent transitions between communities of practice during the period of training. These factors mean that GP trainees face unique challenges to their professional development. This study explores the construction of professional identity in GP trainees during vocational training.

Methods: In-depth semi-structured, narrative interviews with four purposively sampled GP trainees were conducted at two points during the trajectory of their vocational training. Trainees completed audio or written diaries in addition to interviews. Qualitative analysis of data employed a constructionist, sociocultural framework, together with a phenomenological orientation which prioritised the lived experience of trainees. Particular attention was paid to the discursive construction of identity and of general practice within the dataset.

Results: Preliminary results suggest that GP trainees participate fully in the hospital specialty in which they are currently placed, but remain on the periphery of the community of practice. Transitions between different communities of practice represent a particularly stressful time during which new cultural rules must be assimilated. Trainees’ conception of the world of general practice changes significantly as they accumulate experiences throughout training.

Conclusions: General practice and GP training are currently the subject of marked public and political scrutiny. Care needs to be taken at a time of change and upheaval to consider how training should best be constructed to meet the needs of trainees. GP training should be orientated towards producing practitioners who are comfortable and confident in their professional selves, in order to facilitate the best possible service to patients in the community.
Introduction: Electronic learning (elearning) in various forms is increasingly utilised in medical education, consistent with patterns observed in other educational settings. Factors driving this increase are multiple but include increasing student numbers and potential flexibility. There has been a movement to stop questioning whether we ‘should’ be using elearning, instead focusing on ‘how’ to use it. Literature review revealed a paucity of studies investigating potential barriers to elearning engagement. The aim of this study was to add to the knowledge base of the ‘how’ of elearning through exploration of student perceived barriers. A secondary, context specific aim was to inform development of medical student elearning at Queen’s University Belfast (QUB).

Methods: The setting for this two stage qualitative study was the third year medicine course at QUB. Since 2007 the lecture/taught component of the QUB third year course has been available purely through electronic means. Stage one was an email questionnaire administered to successive student cohorts over a four year period. Stage two involved focus groups with a total of 31 participants. Rigorous inductive thematic analysis generated key themes grounded in reported experiences.

Results: Injustice was a powerful theme whereby participants conveyed a sense of resentment. Passivity draws on a sense that they felt themselves ‘passive recipients’ of elearning material. Lost at sea relates to both a sense of social isolation and unfamiliarity with elearning as an approach. Content issues underpinned the other themes.

Conclusions: Injustice and passivity have not previously been described in the literature. They have strong emotional underpinnings. Control-value theory of achievement emotions offers an interesting interpretive lens on the study findings. An appreciation of barriers at play is of relevance to curriculum leads, elearning developers and any individuals seeking to incorporate technology into their educational delivery. This applied qualitative study has already made an impact on local course development.

Methods: A Participatory World Café approach to consult relevant stakeholders in the Midwest region was used. A total of 63 participants from Limerick, Ennis, and the Faculty of Education and Health Sciences at the University of Limerick attended Limerick (n=32) & Ennis (n=31) Cafés. Participants discussed and documented their responses to a range of questions including “Are there areas where more information or deeper investigation would help realise the ambition of healthier communities?”. Data was analysed using NVIVO software following the principles of a thematic analysis. A mapping exercise is ongoing to match these findings with existing research interests in the University of Limerick.

Results: Emerging themes for more information and further investigation included a focus on community involvement in service planning, implementing evidence-based strategies and health promotion for chronic conditions. Improving understanding of primary healthcare services and focusing on specific needs of certain social groups such as Migrants and Travellers were also emphasised. There was evidence of recurring themes between both Limerick and Ennis Cafés.

Conclusions: Priority issues for further investigation and research from the perspective of regional stakeholders were successfully identified. Ongoing mapping of the results with existing research may stimulate new partnerships between regional stakeholders and researchers.
Introduction: Good doctors communicate effectively with patients—they identify patients' problems more accurately, and patients are more satisfied with the care they receive. Communication Skills are often taught by General Practitioners in medical schools. Currently in UCD we use common methods that are employed in teaching communication skills to medical students. However to date, in designing our communication teaching, we have not considered what our students' concerns are in relation to communicating with patients and our methods have mainly been focused on consultations which will be done primarily through the medium of English despite the fact in the real life situation our students will be faced with language (and cultural) differences. In this study the aim was to explore student concerns about communication with patients just before they start their clinical placements. With the students' input, we hope to adapt our current communication skills teaching to include their perceived learning needs with the aim of helping them to be more confident and prepared for real life interactions with patients.

Methods: A mixed methods approach comprising an on line survey and a focus group. An online survey was sent to 216 4th Year Undergraduate Medical Students at UCD School of Medicine and Medical Science. Within this group, 141 will be doing their final 2 years of clinical training in Ireland and 75 shall be doing their final 2 years in Penang in Malaysia. A Focus group of a cohort of these students to explore themes raised in the online survey is being held at the start of February.

Results: Common themes identified from the preliminary results of the survey include fears about language and accents, knowledge deficits, fears about certain patient groups (elderly patients, young patients, difficult patients, members of the travelling community) and concerns about how the patients will perceive them.

Conclusions: Our current communication skills' teaching does not address all of these student concerns and consideration should be given into how we can incorporate them into our teaching.


Clinical ethics reasoning through simulation (CERTS): the phenomenology of an undergraduate experience in authentic clinical complexity

Gormley G, Lewis G, McCullough M, Maxwell AP

OBJECTIVES: Students transitioning into professional practice feel unprepared to deal with the emotional complexities of real-life ethical situations [1]. The few published attempts at authentic ethics simulation have not generated sufficiently deep accounts of student experience to inform pedagogy [2–6]. We wished to understand the lived experiences of medical undergraduates as they engage with a complex ward-based simulated ethics scenarios and to explore how students handle stress, complexity, uncertainty and negotiate professional hierarchies.

METHODS: Eight 4th year medical students at Queen’s University Belfast participated in the realistic CERTS environment. They wore video headcams that recorded footage during the simulation. A series of ethically challenging encounters, with multiple parties, unfolded whilst the students performed a clinical task. Whilst performing a clinical task a series of ethically challenging encounters with multiple parties unfolded. Students were interviewed immediately after the scenario and headcam footage played back to them. An interpretative phenomenological analysis was conducted on verbatim interview transcripts.

RESULTS: Six main themes emerged: i) Simulation, ii) Emotions, iii) Ethical Boundaries, iv) Role and Identity, v) Prior Experiences, vi) Balancing. Students described a wide range of varied emotions, wrestled with moral difficulties dilemmas, and felt CERTS was true to life and beneficial in developing ethics reasoning and navigating interprofessional hierarchies.

CONCLUSION: The CERTS model recreates a clinical environment whose in which complexity and uncertainty authentically mirrors reality. It has potential in helping undergraduates explore the impact of emotion and stress on balanced ethical decision making. The interprofessional, moral and ethical boundaries that frame clinical practice can be safely probed in a way that is acceptable to learners. CERTS holds promise for developing the skills required of students transitioning into professional life.

Implementing cross-cultural communication guidelines and training initiatives on the ground: a participatory study exploring implementation work with stakeholders in five European primary care settings

Gravenhorst K, Dowrick C, MacFarlane A on behalf of the RESTORE consortium

Introduction: Guidelines and Training Initiatives (G/TIs) to improve cross-cultural communication in primary care do exist, yet little is known about the work required of multiple stakeholders to successfully implement such G/TIs in practice. Our paper addresses this knowledge gap, reporting findings on the experience of implementation from the RESTORE project, where research teams worked with local stakeholder groups to select and implement G/TIs to improve cross-cultural communication in 5 European primary care settings.

Methods: Adopting a case-study approach, The RESTORE Project used a unique combination of Normalization Process Theory (NPT) and Participatory Learning and Action (PLA) methodology to support 5 implementation journeys lasting from 15-19 months. Working closely with mixed stakeholder groups (migrants, GPs, practice assistants, receptionists, interpreters, policy makers and health service planners) in each setting, research teams facilitated a total of 62 PLA sessions which provide the data for this paper.

Results: We identified three key areas of work requiring considerable amounts of time and effort: (1) engaging and collaborating with relevant stakeholders, (2) adapting the selected G/TI to fit the local context and current policy environment, and (3) advertising the new service or TI. Engaging multiple stakeholders in a participatory dialogue was challenging, but enabled us to tap into a large pool of local expertise, enhanced learning around the stakeholder table and generated creative solutions to implementation challenges. Adapting G/TIs to fit local contexts was time consuming yet it ensured buy-in and meant that carefully tailored interventions were delivered. Advertising new services and TIs was labour intensive and required considerable time to take effect somewhat hampering uptake of services in two settings.

Conclusions: Implementing G/TIs in practice is complex and the five cases analysed here have revealed factors which promote and inhibit implementation. These are likely to be of relevance for designing interventions and ensuring successful implementation in other settings.

Prevalence of prescribing in pregnancy using the Irish Primary Care Research Network: a pilot study


Introduction: The use of medication in pregnancy is often necessary for the treatment of acute or chronic illnesses. However, medication use may also be inadvertent or inappropriate. Reported prevalence rates internationally are between 40 and 99%. The aim of this study was to establish the prevalence and patterns of prescribing to pregnant women in an Irish primary care setting.

Methods: We reviewed routinely collected electronic healthcare records of pregnant women attending nine Dublin-based General Practices affiliated to the Irish Primary Care Research Network (IPCRN) for antenatal care between January 2007 and October 2013 (n=2,361 pregnancies). We applied the US FDA pregnancy-risk categories as a proxy measure of prescribing appropriateness, with FDA Category D and X medications considered inappropriate.

Results: Excluding folic acid, 46.8% (n=1,104) pregnant women were prescribed at least one medication. Amoxicillin (11.1%, n=263) and co-amoxiclav (8.0%, n=190) were the most commonly prescribed medication followed by topical clotrimazole (4.9%, n=117), salbutamol inhalers (4.1%, n=96) and paracetamol (4.0%, n=95). FDA Category D drugs were prescribed in 5.9% (n=140) of pregnancies and FDA Category X drugs were prescribed in 4.9% (n=116) of pregnancies. After the initial antenatal consultation the prescribing prevalence of FDA Category D medications reduced to 4.7% (n=110) and Category X to 3.1% (n=72). After exclusion of oral contraceptives, progestogens and infertility treatments, Category X medications were prescribed in 0.6% (n=14) of pregnancies.

Conclusions: Overall prevalence of prescribing to pregnant women in our cohort is low compared to studies internationally. Following the initial antenatal consultation the prescribing prevalence of FDA Category D medications reduced to 4.7% (n=110) and Category X to 3.1% (n=72). After exclusion of oral contraceptives, progestogens and infertility treatments, Category X medications were prescribed in 0.6% (n=14) of pregnancies.

The IPCRN database provided valuable information on current practice for antenatal prescribing within this pilot group of practices however it’s limited by the absence of morbidity and pregnancy outcome data.
Knowledge of symptoms, signs, diet and lifestyle management among people with diabetes in Northern Malawi

Chisale M, Tsung-ShuWu J, Chipeta M, Ngwira M, Gallagher J, Watson C

Introduction: This study assessed the levels of knowledge of signs, symptoms, diet, physical exercise and monitoring of blood sugar among people with diabetes in Northern Malawi.

Methods: 200 patients attending three clinics in the region were selected using convenience sampling. Semi-structured questionnaire on knowledge regarding signs and symptoms of DM, diet, physical exercise as well as monitoring of sugar at home setting were used. Participants were defined as having poor knowledge when they identified less than 50% of the proposed answers for each section correctly. Interviews were conducted in the local Tumbuku language.

Results: 147 (73.5%) of participants had poor knowledge of the signs and symptoms of DM. 41.5% of participants had poor knowledge of appropriate dietary items with significant differences depending on the participant's health facility, occupation and whether urban or rural. Only 29.0% of participants with duration of more than 4 years after diagnosis of DM had good knowledge on physical exercise as compared to 52% of those with less than one year after diagnosis. 102 (85.0%) of the participants from MZCH had a good level of knowledge on monitoring of sugar at home setting compared to the district hospitals (KDH and NKDH) which were 14 (35.0%) and 11 (27.5%) (P<0.001)

Conclusions: The current level of knowledge among the DM patients is not adequate to enable them self-manage their condition since it lacks consistency and coherence. Therefore concerted efforts by all stakeholders are needed to develop DM educational tools and promote DM patient education in hospitals.

Use of the CHADS2 & CHADS2Vasc scores to identify those in sinus rhythm at risk of CVA/TIA

Gallagher J, O’Connell E, Watson C, Ledwidge M, McDonald K

Introduction: The CHADS2 and CHADS2Vasc scores are widely used to predict rise of thromboembolism in those with non valvular atrial fibrillation. Patients not in permanent atrial fibrillation but with significant cardiovascular risk have been shown to have high rates of silent paroxysmal atrial fibrillation. This study sought to determine if these scores could be used to predict risk of CVA/TIA in patients with cardiovascular risk factors in sinus rhythm.

Methods: Participants in the STOP HF study with a minimum of three years of follow up and no record of atrial fibrillation at any time were included. The percentage of patients with incident CVA/TIA in each CHADS2 and CHADS2Vasc score were calculated. The odds ratio associated with an increase of one in each score was also calculated

Results: 788 patients with a mean age of 64.4 years were included. 47.5% were male. Results are outlined in the tables below.

<table>
<thead>
<tr>
<th>CHADS2 score</th>
<th>Stroke/TIA prevalence</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>1</td>
<td>1.8%</td>
</tr>
<tr>
<td>2</td>
<td>2.2%</td>
</tr>
<tr>
<td>3</td>
<td>1.6%</td>
</tr>
<tr>
<td>4</td>
<td>10.8%</td>
</tr>
<tr>
<td>5+</td>
<td>20.0%</td>
</tr>
<tr>
<td>Total</td>
<td>3.6%</td>
</tr>
</tbody>
</table>

Table 1. CHADS2 and CHADS2-Vasc breakdown

<table>
<thead>
<tr>
<th>CHADS2</th>
<th>Unadjusted OR (95% CI)†</th>
<th>Adjusted OR (95% CI)†</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHADS2</td>
<td>2.27 (1.46,3.52)**</td>
<td>2.05 (1.30,3.22)**</td>
</tr>
<tr>
<td>CHADS2-Vasc</td>
<td>2.22 (1.59,3.09)***</td>
<td>2.05 (1.43,2.93)***</td>
</tr>
<tr>
<td>BNP‡</td>
<td>1.81 (1.26,2.62)**</td>
<td>1.33 (0.88,2.00)</td>
</tr>
</tbody>
</table>

†CHADS2 & CHADS2-Vasc adjusted for log-transformed BNP, log-transformed BNP adjusted for CHADS2-Vasc. † log-transformed. * p < .05, ** p < .01, *** p < .001.

Conclusions: IN patients in sinus rhythm with cardiovascular risk factors the CHADS2 and CHADS2Vasc score were predictive of CVA/TIA. Reasons for this should be explored further.
Knowledge of diabetes care among primary healthcare workers in Northern Malawi

Gallagher J, Chisale M, Chipolombwe J, Watson C

Introduction
Africa will see the greatest rise in the prevalence of diabetes internationally in the next decade. There is a major emphasis on the development of primary care for the management of illness in Africa. However to date this has focused on infectious diseases. This study sought to determine the knowledge of primary healthcare workers in Northern Malawi about diabetes.

Methods
Semi structured interviews were undertaken with 23 primary healthcare workers in Northern Malawi. These were conducted in the local Tumbuku language.

Results
Four nurses, one clinical officer and 18 health surveillance assistants participated in the study. Mean age was 38.1 years and 74% were female. 96% had heart of diabetes and 83% knew someone with diabetes. Consumption of too much sugar, failure to use insulin and lack of insulin were cited as causes of diabetes by 78%, 52% and 43% of participants respectively. The majority of participants were able to accurately identify the symptoms and complication of diabetes. No participant was aware of any guidelines to manage diabetes. 26% would do nothing if they suspected someone had diabetes as they felt there were no facilities to manage the condition in Malawi. 65% had no access to a method to measure blood pressure.

Conclusion
Despite the dramatic increase in the prevalence of diabetes in Africa primary healthcare workers are unaware of guidelines for its management and do not have access to facilities to manage it. This will require development of new strategies for education and management of chronic illness in low and middle income countries.

Do echocardiographic parameters recommended in hypertension guidelines as markers of risk correlate with outcomes?

Gallagher J, O’Connell E, Watson C, Ledwidge M, McDonald K

Introduction: Current European Society of Cardiology guidelines suggest that ideally all patients with hypertension should undergo echocardiography at initial evaluation. This is to help refine risk and identify LV remodeling and diastolic dysfunction. This sought to determine the correlation between the suggested parameters and the incidence of major adverse cardiovascular events (MACE) and all cause mortality in a community cohort with cardiovascular risk factors.

Methods: Participants in the STOP HF study with a history of hypertension and full baseline echocardiographic data were included. The numbers with each of the echocardiographic parameters, and odds ratio for each of the individual parameters and for an elevated BNP level (both unadjusted and adjusted for the other variables) were calculated.

Results: 492 patients with a mean age of 64.2 years were included. 49% were male. Results are outlined in the table below.

Table 1. Prediction of Events (MACE/RIP) echo features

<table>
<thead>
<tr>
<th>Feature</th>
<th>Unadjusted OR (95% CI)</th>
<th>Adjusted OR (95% CI)†</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low EF</td>
<td>2.88 (1.18,7.04)*</td>
<td>1.55 (0.57,4.19)</td>
</tr>
<tr>
<td>High LVMI</td>
<td>1.68 (0.87,3.25)</td>
<td>1.46 (0.70,3.05)</td>
</tr>
<tr>
<td>High RWd</td>
<td>0.73 (0.38,1.40)</td>
<td>0.68 (0.34,1.37)</td>
</tr>
<tr>
<td>Low lat. e'</td>
<td>1.87 (0.76,4.56)</td>
<td>1.92 (0.76,4.87)</td>
</tr>
<tr>
<td>High LAVi</td>
<td>2.21 (1.09,4.46)*</td>
<td>1.21 (0.54,2.73)</td>
</tr>
<tr>
<td>High BNP‡</td>
<td>5.00 (2.25,11.08)</td>
<td>4.56 (1.99,10.46)***</td>
</tr>
</tbody>
</table>

†Adjusted for other five variables. ‡ BNP > median (23 pg/mL). * p < .05, ** p < .01, *** p < .001.

Conclusions: Many of the recommended echocardiographic parameters for identifying high risk individuals with hypertension are common in a community cohort and are not associated with MACE or death. The use of cardioprotective medications in treated patients may have influenced the effect of these surrogate markers on outcomes. However an elevated BNP is a simpler test to perform and has a significant association with MACE and death.
Minor surgery in a General Practice - a 1 year review

McCormack D, Nixon S, Harrington P, Gallagher J

**Introduction**

This study sought to determine the range of minor surgical procedures performed in a single group practice, referral rate to secondary care for further surgical procedures and post operative complications.

**Methods**

All minor surgical procedures coded in the practice electronic health record between January and December 2014 were reviewed. Details on demographics, type of procedure, histology, hospital referral and payment type were retrieved. Injections of joints and bursae were excluded.

**Results**

133 procedures were performed over the 12 month period. Mean age was 44 years with a range from 9 to 84 years of age. 44% were female. The most common procedure was removal of ingrown toenail (46 cases) followed by lesion excision (32) and punch biopsy (17). 58 cases were sent for histological analysis. 12 cases had a change in diagnosis following histopathology. In five cases the diagnosis was changed from malignant to benign, in one case from benign to malignant and in six cases from one benign diagnosis to another benign diagnosis. Eight cases required further hospital referral for surgery. No post-operative complication were recorded from general practice.

**Conclusions**

Minor surgery can be safely performed in general practice with a low rate of referral to secondary care for further procedures.

Use of the ECG and BNP to detect stage B heart failure in an at risk community cohort

Murphy M, James S, Murphy T, Watson C, Ledwidge M, McDonald K, Gallagher J

**Introduction:** The ACC/AHA guidelines, identify those with risk factors for HF but no structural or functional heart disease (stage A HF) or those with defined structural and/or functional heart disease (stage B HF). These groups are identified as particularly high risk for the later development of symptomatic HF (stage C/D heart failure). Guidelines such as the ESC guidelines on hypertension suggest using ECG to screen for components of the stage B heart failure such as left ventricular hypertrophy. The aims of this study were to determine the usefulness of the ECG and BNP in differentiating stage A and B heart failure in an at risk community cohort.

**Methods:** This study was performed in a prospectively collected cohort of community-based patients with risk factors for ventricular dysfunction – the STOP-HF cohort. The ECGs were read by two clinicians and graded according to a standard ECG classification system. In cases of disagreement a blinded third reviewer was involved. Abnormal ECGs and stage B heart failure were pre-defined using international definitions.

**Results:** An abnormal ECG has a sensitivity of 41.09% for detecting Stage B HF (95% CI: 36.55 % to 45.74 %) and a specificity of 81.26% (95% CI: 78.66 % to 83.66 %). The positive predictive value (PPV) of an abnormal ECG for detecting Stage B HF was 50.94% (95% CI: 45.73 % to 56.14 %) and the negative predictive value (NPV) was 74.43% (95% CI: 71.70 % to 77.04 %). BNP had an AUC of 0.68 for identifying stage B HF. An abnormal ECG did not add to this.

**Conclusions:** An abnormal ECG on its own is a poor predictor of stage B heart failure. Further work to determine to develop a clinical prediction rule to identify those with stage B heart failure should be undertaken.
Antimicrobial Susceptibility Profile in Bacteria Isolated From Urinary Tract Infection in Mzuzu, Northern Malawi

Chisale M, Ngosi S, Dambula F, Kumwenda P and Ngwira M, Watson C, Gallagher J

Introduction: Effective empirical management of urinary tract infection (UTI) relies on the isolation of the common causative uropathogens and their antimicrobial susceptibility patterns. This study was conducted to evaluate the uropathogenic bacteria and its antimicrobial susceptibility profile among patients presenting to the Out-Patient Department at Mzuzu Central Hospital in Northern Malawi. In this setting the Out Patient Department functions as a primary care facility for the local community.

Methods: In September 2014, a pilot study involving 50 urine specimens from symptomatic UTI patients attending to the Out-patient department were randomly selected and processed in the microbiology laboratory department at Mzuzu Central Hospital laboratory. The urine samples were cultured on CLED media and MacKonkey; the isolates were gram-stained and identified using biochemical reaction tests. Antimicrobial susceptibility testing was performed by the Kirby-Bauer disc diffusion method.

Results: Out of the 50 samples which were cultured one sample was excluded after showing growth of Candida species. Pathogens were isolated from 12 (24.5%) of the 49 urine specimens which were fully analysed. Enterococcus species was the most frequently isolated bacteria accounting for 41.67 % of the total isolates followed by Escherichia coli and Klebsiella oxytoca both at 25 %. High resistance was registered to erythromycin (94 %), ceftriaxone (68 %), gentamycin (68 %) and chloramphenicol (58 %) which are agents commonly used as empiric treatment for UTI in Mzuzu. However, Nitrofurantoin (100 %), and Amoxicillin-Clavulanic acid (67 %) were the most effective drugs against the isolated bacterial uropathogens.

Conclusions: There was a low false positive rate for culture in this study. Use of urine dipsticks and microscopy may help reduce use of urine culture. High levels of resistance were observed against antibiotics used as empiric treatment for UTI in this area. All isolates were sensitive to nitrofurantoin which may be a suitable empiric treatment for UTI in this settin. However, further study is required given the low numbers in this pilot study.

Psychosocial INTerventions for Problem Alcohol Use among People who Attend Primary Care for Substance Use Treatment (PINTA): Baseline data from a feasibility study


Introduction: Primary care is a key provider of continuing care for people who attend primary care for substance use treatment, especially those on methadone maintenance treatment. As many also drink alcohol excessively, there is a need to address alcohol use to improve health outcomes. We examined problem alcohol use and its treatment among people who attend primary care for substance use treatment, using baseline data from a feasibility study of an evidence-based complex intervention to improve care.

Methods: Data on addiction care processes were collected by (1) reviewing clinical records of people who attended 15 General Practices (GP) for substance use treatment (n=129), (2) administering structured questionnaires to both patients (n=105), and General Practitioners (GPs) (n=15).

Results: Review of clinical records indicated 24 (19%) had been screened for problem alcohol use in the 12 months prior to data collection. Fourteen (11%) screened positive for problem alcohol use, of whom five had received a ‘brief intervention’ by a GP, and none had been referred to specialist treatment (SBIRT). Alcohol Use Disorders Identification Test (AUDIT) scores revealed the prevalence of hazardous, harmful and dependent drinking to be 23%, 5%, and 16% respectively; intraclass correlation coefficient (ICC) for the proportion of patients with negative AUDITs was 0.038 (Standard Error 0.01). The ICCs for SBIRT were 0.16 (SE= 0.014), -0.06 (0.017), and 0.22 (0.026) for screening, brief intervention and referral, respectively. Only 12 (11.5%) AUDIT questionnaires concurred with corresponding clinical records that a patient had any/ no problem alcohol use.

Conclusions: Comparing clinical records with patients’ experience of SBIRT can shed light on the process of care. Alcohol screening of people who attend primary care for substance use treatment is not routinely conducted. Interventions that enhance the care of problem alcohol use among this high-risk group are a priority.
Processes of care and healthcare utilisation among patients with Type 2 diabetes attending general practice

Hickey L, Hannigan A, O’Connor R, O’Regan A, Cullen W (UCD)

Introduction: The number of people living with type 2 diabetes has increased globally from 135 million in 1995 to 347 million in 2011, with an estimated prevalence in Ireland of 4.5%. To reduce the burden of poorly controlled type 2 diabetes, optimum management is required to assess coping, evidence of deterioration or complications, with regular review (at least annually). This study investigates the service utilisation, referrals and review processes of diabetic patients in primary care.

Methods: Patients with type 2 diabetes were identified from clinical records at 31 general practices affiliated to the host institution in three Health Service Executive regions. Using a previously developed standardised reporting tool, data was extracted from clinical records on patient demographics, service utilisation, referrals and treatment.

Results: A total of 2,732 patients with type 2 diabetes were identified (median age=66, 60% male, 76% GMS eligible). 2,626(96%) patients had attended their GP within the previous year and their median number of consultations was seven. 647(25%) patients had been admitted to hospital and 484(18%) had attended the Emergency Department. Average HbA1c level was 51mmol/L with 59% of patients having a value less than or equal to 53mmol/L recorded from 2,296 (87%) patients. Average serum creatinine level was 80umol/L with a quarter of values above 97umol/L recorded from 2,332 (89%) patients. Of those patients with a documented BMI (50%) in the past 12 months, 56% were obese and of those with smoking status documented (52%), 23% were smokers.

Conclusions: The results show a high prevalence of renal impairment, obesity and smoking and also highlight a gap from national guidelines in recording of health outcomes. The introduction of a structured care programme and the resources to implement such a programme is central to the management and care of patients with type 2 diabetes in primary care in Ireland.

Psychological morbidity among adults attending primary care: a cross sectional study

Hickey L, Hannigan A, O’Regan A, Meagher D, Cullen W (UCD)

Introduction: The World Health Organisation estimates that 10% of the adult population experience a mental or behavioural problem at any given time with the number of people experiencing such problems estimated to increase to 15% by 2020. Many of those experiencing mental health issues can be managed in primary care and will not need to engage with specialist mental health services. This study investigates the prevalence of psychological morbidity and management of those presenting to their general practitioner with psychological problems.

Methods: A random sample of 100 patients with a consultation in the previous two years was selected from the practice management systems of 39 general practices affiliated to the host institution based in three Health Service Executive regions. Clinical records were examined using a previously developed standard reporting tool to extract information on demographics, health service utilisation, psychological problems, diagnoses, treatment and referrals of patients.

Results: 3,745 active patients were selected (mean age=47, 53% female, 49% GMS eligible). From this sample, 611 patients (16%, 95% confidence interval: 15-17%) had a documented psychological problem. The most common psychological problems were depression (54%) and stress and anxiety (48%). Problems were identified mainly in consultation notes (84%) and coding of problems was rare (8%). Of those with psychological problems, over a third were referred to another agency (33%), specialist mental health services (34%) and/or received a psychological intervention (34%). Pharmacological treatments were commonly prescribed (81%); primarily antidepressants (34%).

Conclusions: Given the high rate of prescribing, a range of appropriate treatments available for people with psychological problems in primary care is a priority. Further education of GPs and integration and collaboration of community, primary care and specialist services is central for optimum care and positive health outcomes.
Does the performance of candidates in Multiple Mini-Interview predict future performance during their medical school career?

Weir J, Steele K, Stevenson M

Introduction: The 2009 GMC document “Tomorrow’s Doctors” states that selection criteria should take account of both personal and academic qualities. The Multiple Mini-Interview (MMI) has been developed to assess non-cognitive skills and is used for medical school selection at Queen’s University in Belfast. More research is required to demonstrate its predictive validity, including comparison to other UK pre-admissions measures.

Methods: Applicants were selected for MMI based on academic performance and the UK Clinical Aptitude Test (UKCAT) in 2012 and 2013. Candidates were then selected for medical school according to their MMI score. First and second year examination scores were matched for 199 and 236 first- and second year students respectively who undertook the 2012 MMIs, and 235 first-year students who undertook the 2013 MMIs. Pearson’s correlations were used to test the relationships between MMI scores, scores in written examinations, Multiple Choice Questions (MCQs) and Objective Structured Clinical Examinations (OSCEs) and UKCAT performance.

Results: Performance in MMIs was significantly correlated with performance in OSCEs and to a lesser extent with written exams but was not correlated with performance in MCQs. UKCAT correlated best with MCQs, less so with written exams and there was no correlation with OSCEs. There was no correlation between MMI score and either UKCAT score or A level score.

Conclusions: This study reports findings on the largest undergraduate sample to date. The MMI was the most consistent predictor of success in OSCE examinations, which can be postulated to be more representative of non-cognitive attributes whereas UKCAT was predictive of MCQ score which could represent cognitive skills. The study thus provides evidence to support the predictive validity of MMIs particularly performance in examinations testing clinical skills but also provides evidence that the UKCAT may play a complementary role. It would also suggest that further longitudinal research to examine the ongoing relationship between MMIs and performance in medical school examination will be worthwhile.

Cardiac arrest in Irish general practice – survivors 2007-2014

Bury G, Headon M, Tobin H, Egan M

Introduction: In 2013 the Out of Hospital Cardiac Arrest Register (OHCAR) identified 1,903 incidents in all Irish ambulance services; 120 survived (6%). The MERIT Project supports 508 general practices (of about 1,200 nationally) with AEDs and training for cardiac arrest care; all report data on cardiac arrests with resuscitation attempts (CARAs) involving their staff. Most other general practices in Ireland now have AEDs.

Methods: Quarterly surveys of MERIT practices (mean 90% response rate) report CARAs which are then followed by telephone review of the event and at 3 months for outcome. On average, practices report 50 CARAs per year with 10 survivors. In 2014, we reviewed all survivor cases in terms of the incident, patient and GP characteristics and outcomes where known. GPs were asked to identify the quality of life for survivors, where known.

Results: 69 survivors were identified in the 7 year period (20% female, all witnessed, 71% return of circulation on scene, 65% rural area). 61% were patients of the GP involved, 23% occurred in the patient’s home and the GP provided the first AED on scene in 54% of cases.

Follow-up data was available on 51/69 cases; 3 others had died within three months. Almost all patients were discharged home from hospital and 70% of cases, the GP reported the patient had a completely independent quality of life three months after the event.

Conclusions: GPs contribute care during cardiac arrest in at least 10% of all cases in which patients survive OHCA. Patients who survive the event do well and can look forward to an independent quality of life. It is increasingly clear that general practice plays a key role in this rare but critical emergency in the community.
An educational intervention for overdose prevention and Naloxone Distribution by General Practice trainees

Bury G, Klimas J, Tobin H, Egan M, Coleman N

Introduction: Ireland has one of the highest rates of death from opiate overdose in Europe (over 200 in 2012) but no programmes for naloxone distribution or overdose prevention. A limited pilot programme is planned by the HSE, based on injectable naloxone prescribed by doctors; more innovative next steps involving intranasal naloxone (INN) are planned. Although much involved in drug treatment services, GPs have been minimally involved with opiate education and overdose prevention initiatives. This project developed and tested an educational initiative for GP trainees on INN use.

Methods: Participants (N=23) from one postgraduate training scheme in Ireland participated in a one hour training session. The repeated-measures design, using the validated Opioid Overdose Knowledge (OOKS) and Attitudes (OOAS) Scales, examined changes immediately after training. Attitudes, acceptability and satisfaction with training were measured with a self-administered questionnaire.

Results: 43% of the practices involved were in Dublin and only 26% were Opiate Substitution Therapy practices. However, 35% of trainees were trained methadone prescribers and 48% had witnessed an opiate overdose. Among trainees, knowledge of the risks of overdose, characteristics of overdose and appropriate actions to be taken increased significantly post-training [OOKS mean difference, 4.65 (standard deviation 4.13); P<0.001]; attitudes improved too [OOAS mean difference, 11.13 (SD 6.38); P<0.001]. The most and least useful delivery methods were simulation and training video, respectively.

Conclusion: This educational session has significantly improved knowledge of and positive attitudes towards overdose management among GP trainees. It may provide an effective basis for structured involvement of GPs in overdose education and prevention in the future.

Atrial fibrillation screening in Irish general practice: a large scale feasibility trial

Bury G, Kelleher C, Fitzmaurice D, Egan M, Tobin H, Cullen W

Introduction: Atrial Fibrillation (AF) affects up to 10% of older patients and causes up to 20% of strokes. Many cases are asymptomatic until a major clinical event occurs, making screening in general practice a key need. While pulse checks are advocated as equivalent to any other strategy, 3 lead ECG screening is effective and much simpler than 12 lead ECGs. Following an initial rigorous trial in general practice, this study aimed to test the feasibility of 3-lead screening in a large scale feasibility study.

Methods: 54 practices within MERIT were invited to take part in a six month screening study in which any patient with clinical or at risk markers could be screened; supporting materials were provided. Data was collected on the numbers screened, demographic and clinical information; all ECGs are recorded electronically and collated centrally for review.

Results: 44 practices completed the study, inviting 1037 patients, 971 were screened with 860 ECGs collated centrally; 1021 chart reviews were completed. 20% of practices screened more than 40 patients, with two screening more than 100 patients. 57% were male, median age 72 (range 14-98); around 300 patients with known AF were screened. Data will be presented on patient profiles, ECG findings and patient and GP feedback.

Conclusions: In a pragmatic setting (but with significant additional data to be recorded over normal clinical practice) 44/54 (81%) of invited practices screened >1000 patients of their choice, identifying numbers of new cases. The methodology appears feasible in routine general practice and the 3-lead technology in use has the potential for significant technical improvement. This may be a meaningful screening strategy for future detection of asymptomatic AF in the community.
53 Lived experiences of homelessness and mental health

Barror S, O'Reilly F, O'Carroll A

Introduction: This research aimed to examine homeless people's experience of mental health problems and services. The research literature consistently demonstrates that mental health problems are prevalent among homeless populations both in Ireland and internationally. However, most of the research is quantitative; few studies have attempted to explore homeless people's experience of mental health problems and services. Consequently, relatively little is known about the perspectives of homeless people on their psychological health and well-being or about their experience of accessing services and supports. This study aimed to explore and examine: a homeless person's understanding of a mental health problem; their experience of being diagnosed with a mental health problem; a homeless person's everyday experiences of living with a mental health problem; their experience of accessing services, treatment and support; and their perception of barriers to recovery.

Methods: In this qualitative study, eight homeless people were interviewed about their lives and in particular, their mental health. To be eligible, participants had to have been long-term homeless (more than six months) and have a diagnosed mental health problem. Participants were recruited, with the assistance of a GP, through two homeless services in Dublin City, Ireland. An interview schedule was used to guide the conduct of an in-depth interview.

Results: Themes that emerged from the study were: the heterogeneity of those interviewed; the importance of positive relationships in the lives of study participants; the uncertainty around services available and how to access them; the necessity of housing.

Conclusions: The group varied in characteristics and need. Participants' experiences point to the need for services to take this variation into account and therefore wrap themselves around the individual, capitalising on the position of the keyworker. The Housing First strategy presents both the individualised approach and a solution to housing need which can have a sustainable impact on current and future mental health and well-being.

54 Haematology values in a healthy Malawian population


Introduction: Reference ranges for hematological and other laboratory tests in Malawi are based on populations in Europe and North America. These may not accurately reflect the normal reference ranges in African populations due to differences in the characteristics of the populations and environmental factors. The objective of this study was to determine the distribution of hematological parameters in healthy, females and males aged 19 to 35 years, residing in Blantyre city, Malawi. We also determined the effect of socio-demographic and nutritional factors (such as gender, age and Body Mass Index (BMI)) on the hematological parameters.

Methods: We conducted a proof-of-concept cross-sectional study involving 105 healthy blood donors at Malawi Blood Transfusion Service (MBTS) Blantyre city, Malawi, after seeking informed consent from participants. Eligible participants were HIV negative males and females aged 19–35 years who do not have any evidence of clinically-apparent acute or chronic illnesses or blood borne infections such as syphilis, hepatitis and malaria. We performed the hematological tests at the Malawi-Liverpool Welcome Trust (MLW) and the screening tests at MBTS laboratories.

Results: Out of the 170 enrolled healthy volunteers, hematological results were available for 105 participants. The proportions of results which were below the lower limit of the current reference range were 35.2% for Hb, 15.2% for neutrophils, 23.8% for eosinophils and 88.6% for basophile counts. Conversely, the proportion of results that were above the upper limit of the manufacturer's reference ranges were 9.5% for platelets and 12.4% for monocyte. We also observed that the mean WBC and basophiles count were significantly higher in males than females ($P=0.042$ and 0.015, respectively. However there were no statistically significant differences in hematological results were observed among different ethnic groups, age and BMI groups.

Conclusions: Based on these results, over half of our otherwise healthy study participants would have at least one abnormal hematological result. Larger studies are needed to establish locally relevant normal reference ranges for the Malawian population. This will enable more accurate interpretation of laboratory results.
A qualitative exploration of factors that promote sedentary behavior and physical activity at work - what the GP should know.

Tully M, Cole JA, Cupples ME

Introduction: Sedentary behavior is a risk factor for adverse health consequences: to reduce sedentary behaviour and promote physical activity at work is a priority target for health promotion. However, little is known about how to effect change. We aimed to explore desk-based office workers’ perceptions of factors that limited or encouraged physical activity and reduced sitting time at work, including the use of a novel mobile phone application.

Methods: We invited office staff (2 managers; 12 employees) in a software engineering company to participate in semi-structured interviews to explore influences on workplace physical activity. We assessed their level of physical activity using the validated Global Physical Activity Questionnaire and an accelerometer, to provide context for comments. Physical activity and sedentary behaviour were assessed by accelerometers after they used a mobile phone application to record their activity at self-selected time intervals daily for 2 weeks. Their experiences of using the application as a prompt to change behavior were explored by questionnaire. Interviews were analysed using a thematic framework. Patterns of sedentary behaviour during office hours were described.

Results: Major barriers to workplace physical activity were similar for participants with varying levels of physical activity. These included the pressure of ‘getting the job done’, a perceived need to sit at a computer to work, personal preferences for the use of time at work, and a lack of facilities. Incentives for reduced sedentariness included definite reasons to leave their desks, social interaction and relief of physical and mental symptoms of prolonged sitting.

Conclusions: Thus, perceptions of the cultural context and physical environment at work, as well as personal factors, must be considered when advising patients to reduce their workplace sedentary behaviour. More research is required to identify appropriate approaches to this challenge and inform GPs how best to help promote their patients’ health at work.

The undergraduate GP teaching environment - characteristics of one large network

Magee F, Tobin H, Connolly C, McMeel C, Bury G

Introduction

During clinical placements in primary care, the learning environment for medical students is formed not only by the general practitioner acting as tutor and their practice, but also the local population served by that practice. This aim of this study is to examine this learning environment.

Method

Data was gathered from all UCD GP Tutors and their practices, using a combination of a postal survey and application forms completed at the time of joining the network. Central Statistics Office census data was used to glean information pertaining to the area surrounding each practice. Mapping software was used to georeference practices by address, and buffers were created around each practice which were intersected with census map layers to link the two datasets.

Results

191 GP tutors at 177 practice addresses were included, representing 22 of 26 counties across Ireland with 76 % urban and 24% rural practices. Practice, GP and local context characteristics will be described including practice staffing, postgraduate links and data on the population surrounding each practice, including comparative data on deprivation in urban and rural settings.

Conclusion

Teaching practices cover all practice settings and are representative of the national population in many areas. Practices serving deprived populations are heavily represented.
Prospective use of theory in implementation research: normalization process theory in the EU RESTORE project

MacFarlane A, Mair FS, O'Donnell C, Dowrick C

Introduction: Implementing change in health care settings is always challenging. Consequently there remains a large translational gap between research evidence and routine clinical practice. Theories have been used to retrospectively inform analysis of implementation studies. Here we describe the novel, prospective use of Normalisation Process Theory (NPT) as the underpinning conceptual framework within the RESTORE (Research into Implementation Strategies to support patients of different Origins and language background in a variety of European primary care settings) project to investigate and support the implementation of clinical guidelines or training initiatives (GTIs) relating to communication in cross-cultural general practice consultations.

Methods: NPT was used by an international consortium of researchers (n=18) to inform conceptualization of implementation of GTIs in primary care settings in Ireland, England, the Netherlands, Austria and Greece with 65 research participants. NPT was used to: a) guide initial selection of GTIs for implementation; b) to support and explore implementation processes as the GTIs were translated into practice; and c) as an apriori framework analysis for systematic analysis of transcribed data.

Results: Using NPT we have been able to shape the implementation journeys in RESTORE by ensuring that researchers were alert to all possible influences on the work. NPT helped participants to identify GTIs that would have value in their local setting but, also, which had a chance of being implemented in that setting. Monitoring and analysis of implementation processes provided a clear understanding of levers and barriers to the use of GTIs allowing the identification of shared (eg policy and resource limitations) and differential (eg impact of primary care governance) influences across settings.

Conclusions: The RESTORE project elucidates how NPT can be used as a conceptual lens to examine implementation processes in a prospective fashion. It also has shown the utility of NPT as a theory which can be used across international contexts.

Validation of situational judgement tests in national selection to postgraduate GP training in Ireland; a mixed method design

Regan AM, Patterson F, Aikenhead A, Mansfield G, Byrne M, Conway R

Introduction

At post intern level, doctors in Ireland can apply to General Practice (GP) specialty training. The aim of this mixed method study was twofold. 1. Using a group of experienced GP’s, identify non-academic core competencies deemed essential at the point of selection to training. 2. Design, and pilot situational judgement tests (SJT’s) to assess core competencies alongside interview at national recruitment in 2014.

Methods

Using a validated competency questionnaire (VCQ), competencies considered essential at point of selection to training were identified. Template framework thematic analysis guided data collection and analysis. Competencies, Empathy, Professional Integrity and Coping under Pressure were identified. SJT’s were designed and an analysis of SJT’s for selection (n=146) performed.

Results

Psychometric analysis was used to determine the reliability and content validity of the SJT items. The association between the SJT scores, and interview outcomes were analysed.

Conclusions

A robustly designed SJT provides increased reliability and validity to enhance standardisation for a national coordinated selection process for GP training in Ireland. SJTs can improve selection processes in postgraduate training, which target important non-academic professional core competencies.
End of life planning among frail patients in the General Practice setting using ‘Think Ahead’, an innovative end of life planning tool

Dunphy E, Conlan S, O’Brien S, Loughrey E, Murphy S, O’Shea B

Introduction: End of Life Planning is an area of care known to be increasingly important for social, psychological and medical reasons. The extent to which it is developed varies in different societies. In Ireland, increasing attention has focused on recording simple instructions relating to Resuscitation Status. End of Life properly considered encompasses a larger process, including a wide range of decisions and patient preferences, to be considered, communicated, recorded and acted upon. ‘Think Ahead’ is an end of life planning tool (Forum on the End of Life). Its use among stable patients in general practice and nursing home settings has been previously explored. This study examines its use among frail patients known to be at high risk of dying in the short to intermediate term.

Methods: The SPICT tool was used to identify patients at high risk of dying in the forthcoming 12 months (4 Teaching Practices). Ethical approval was obtained from the TCD HSE GP Training Scheme Ethics Committee. Patients were advised regarding the the Study and invited to participate or decline. Those participating were provided with ‘Think Ahead’, recommended to discuss it with next of kin, and subjected to telephone surveys at 1 and 3 weeks post consultation, to ascertain acceptability, ease of completion, level of completion, extent of engagement with next of kin, feedback regarding recommended modifications and level of upset on engaging with Think Ahead.

Results: Approximately 50 patients have been included and data collection will continue to end of February. Results indicate patients have engaged effectively with Think Ahead. Further, the experience of GPs participating has been positive.

Conclusions: Use of Think Ahead in General Practice is feasible, acceptable and valued by patients approaching end of life. It should be subjected to closer study, including use of GP records in this area of care.

Perceptions and acceptability of the Preferred Drugs Scheme from patients’ perspectives

O’Connor G, O’Keeffe D, Darker C, O’Shea B

Introduction: In April 2013, the HSE launched the “Preferred Drugs Scheme” with the aim of ensuring the cost of medicines could be safely reduced.

As most drugs recommended under the Scheme are part of long term therapy, it is the switching to preferred drugs among patients on established therapy which represents the greatest savings (estimated at €20 million saved in the first year). General Practice representative bodies have not widely accepted the practice of switching established patients’ therapies as viable.

This study investigates if patients on proton pump inhibitors (PPIs) are willing to switch therapy, and if so, to describe their satisfaction and experience after switching drugs.

Methods: 61 repeat prescriptions for non-lansoprazole (the “preferred drug”) PPI’s were identified at the time of patients requesting prescriptions. A questionnaire was completed by the patients regarding their attitudes to switching to lansoprazole and their willingness to switch. Patients agreeing to the substitution completed a second phone questionnaire at 6 weeks in order to ascertain their feedback.

Results: 80% were happy to switch to the preferred drug. 1 in 4 of these had a subjective exacerbation of their symptoms in the 6 weeks after changing drugs and had reverted back to their old PPI. There was a wide variety of opinions regarding the preferred drugs scheme, generic prescribing and cost saving practices with many patients having significant reservations about its merits.

Conclusions: In conclusion, the preferred drugs scheme does not appear to be universally acceptable to primary care patients and caution needs to be exercised when changing patients’ medications for this reason.
61  Cultural diversity in the Royal College of Surgeons, Ireland

Murphy M, Byrne E, McGarvey A

Introduction: RCS has a long tradition of hosting international students and 72% of current students are non-European. Globally, student mobility has grown rapidly over recent decades and they generally have positive life and educational experiences. However, challenges in their adaptation, both academically and socially, can occur for a variety of reasons.

Methods: This two-year phased study aimed to research challenges facing newly arrived international students in RCS and contribute to frameworks on cultural diversity and third level education. The first phase was an exploratory qualitative study. Phase two, reported in this abstract, was an online survey of 73 questions. Academic and social integration was assessed through the Student Adaptation to College Questionnaire and the Social Integration Questionnaire. Simple descriptive statistics, Wilcoxin signed rank test and the Kruskal Wallis test were used to analyse the data.

Results: The response rate was 57% (398/697). 32% were Malaysian, 27% were Middle Eastern, 18% were Irish, 11% were from North America and 13% were from other regions. North American students had the highest social adjustment scale scores; Middle Eastern students had the least. Malaysians and Middle Eastern respondents had the highest perception of faculty scores. Perception of faculty was less in second year students. Malaysian students had lower scores for social support from family and friends than other groups. Students with greater familiarity in the use of English in daily and social life had higher student satisfaction with social life scores.

Conclusions: Rather than looking at students from the perspective of country of origin only, we need to consider additional criteria models to assess international students’ abilities to adapt and hence thrive in an English speaking western third level institution.

62  The acceptability of opt-out screening for blood born virus infection in Irish General Practice

O’Kelly M, Byrne D, Naughton E, Williams C, Bergin C

Introduction: Screening for Blood Born Viruses (BBV) in general practice may be a viable option in identifying unknown and potentially treatable or manageable cases of HIV, Hepatitis B and C.

Methods: Four training practices associated with the Trinity College Dublin/HSE GP training scheme were included in this study. This is an ongoing cross-sectional prevalence study of BBV run in collaboration with the Genitourinary and Infectious Disease (GUIDE) Department in St. James’s Hospital, and the National Virus Reference Laboratory, Dublin. The study received ethical approval from Trinity College Dublin/ HSE GP training ethics committee. All patients attending the practices for routine blood tests were provided with a patient information leaflet informing them about the study. This leaflet detailed that opt-out testing for HIV, Hepatitis B and C (BBV test) would be offered during their routine blood test. Patient choice was documented in their electronic notes using a coding method. The addition of a BBV blood test was included at no extra cost to the patient.

Results: During the first five months of this study, 983 patients were offered BBV screening tests. This represents 6% of the total combined practice populations. The median age tested was 55 years. Of the 983 patients offered screening, 89% (N=874) opted to have a BBV test, with 11% (N=109) opting out. At this point in the study there have been no new HIV cases, but one new Hepatitis B and three new Hepatitis C cases found.

Conclusions: The study is ongoing, and we aim to further evaluate characteristics of patients who opted in and out of the study. All four patients who tested positive as a result of this study have been linked to specialist care, which will have a direct effect on morbidity, mortality and health care related costs for these patients and the health care system.
Screening for Chlamydia Trachomatis and Neisseria Gonorrhoea during routine smear testing in General Practice

Fitzsimmons C, Hassan SJ, Dunphy E, Navin E, Marron L, Darker C, Loy A

Introduction: The incidence of chlamydia (CT) and gonorrhoea (NG) is increasing. Between 2000 and 2012 notifications of CT in Ireland increased from 1343 to 6221, and NG from 290 to 1110. Often undiagnosed, 85% of women and 40% of men with CT are asymptomatic. Both CT and NG have significant health implications. Screening satisfies Wilson's Criteria. Nucleic acid amplification tests (NAATs) of endocervical samples remain gold standard testing for CT/NG in women. This study aims to ascertain if screening for CT/NG during routine smear test is a feasible and acceptable method, and to measure the diagnostic yield of such screening.

Methods: The study was conducted in 5 training practices. Initially, we retrospectively observed the frequency of opportunistic CT/NG screening during routine smear testing. Then CT/NG screening was offered in all women having routine smears aged 25-40 years for 6 months, free of charge. An information leaflet was given on arrival for routine smear. A consent form, option to decline, and short questionnaire included. An endocervical swab was performed during smear for participants, and sent to National Viral Reference Laboratory (NVRL). Those testing positive for CT or NG were offered a free follow up appointment. Those positive for CT were prescribed azithromycin 1g and contact tracing of partners recommended. Regular partners offered treatment regardless of their own results. Referral recommended to Department of Genitourinary Medicine and Infectious Diseases (GUIDE) Clinic for anyone testing positive for NG. Additional screening advised (Syphilis / HIV / Hepatitis B & C serology) for CT/NG positive tests.

Results: 249 women were offered CT/NG testing, and 19 declined. Of the 230 tests performed, 4 CT and zero NG positives found. As data collection has recently been completed, we are currently collating and reviewing qualitative data. We aim to assess the acceptability of the study to participants, and why some declined.

Conclusions: This study is nearing completion. Further details will be available shortly.

How global health partnerships are improving malaria management through mobile technology: a review of the literature

Daly L, O'Connor S, O'Donoghue J, Gallagher J

Introduction: The World Health Organisation set ambitious targets in its Millennium Development Goals to reduce the incidence of malaria worldwide by 75% before 2015. This is having a significant impact on morbidity and mortality in the developing world with an estimated 3.3 million deaths avoided since 2001. An effective malaria control programme includes the rapid identification, diagnosis and treatment of malaria patients. This process has become more streamlined since the introduction of disease management systems, many of which include a mobile health (mHealth) application. These have been the result of proactive local, national and international health partnerships between various nursing and medical associations, government ministries and non-governmental organisations. The aim of this literature review was to examine how international health partnerships developed and how they implemented mobile technology in developing countries to address malaria.

Methods: Several online bibliographical databases including Medline, PubMed, EMBASE, CINAHL and the Cochrane library were searched using a combination of key search terms relevant to mobile technology and malaria management in low resource settings.

Results: Partnerships gained from regular meetings and stakeholder feedback on the development and implementation of the mHealth solution, which helped establish clear working relationships and addressed differences in organisational cultures. It was also important the mobile malaria management system was integrated with local and national health systems and had support of senior Ministry of Health officials. However, developing health informatics competencies of nurses and doctors, and upgrading technical infrastructure to international standards are of critical importance for long-term success.

Conclusions: A recommendation from this review would be for partnerships to undertake a SWOT analysis before commencing the implementation of any mHealth system to ensure potential barriers could be addressed in advance where possible. It would also be beneficial to share the experiences of these type of collaborative models with neighboring countries so lessons learned could help others achieve their malaria management goals.
Thursday 5\textsuperscript{th} March 2015

Venue: Meeting
Riddel Hall
185 Stranmillis Road
Belfast, BT9 5EE
T: (0)28 9097 5664

Dinner
Black and White Hall / Great Hall
Lanyon Building
Queen’s University Belfast

Contact: Roisin / Pauline
07969215184

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Registration

Will be available from 12 noon.

Lunch

Lunch is scheduled for 13:00hrs in the Isdell Courtyard. If you have advised us of any dietary requirements, these have been taken into consideration.

Workshops

The workshops will commence at 14:00 – 16:30 hrs. You will be asked at registration to confirm which workshop you plan to attend.

**Posters

For those accepted for poster presentation, and attending today, boards will be available should you wish to mount your poster in advance. Upon registering, you will find a number on the back of your badge. Please proceed to display your poster on the corresponding board, adhesive strips will be supplied. The recommended poster size is A1 – Portrait or Landscape (23.4 x 33.1 inches) to fit the University Boards.

Dinner

The evening will commence with a drinks reception in the Black and White hall, Queens University Lanyon Building (main entrance to University) at 18:30hrs, followed by dinner in the Great Hall at 19:00hrs. If you have advised us of any dietary requirements, these have been taken into consideration.

Dress Code: Smart casual
Friday 6\textsuperscript{th} March 2015

Venue: Meeting
Riddel Hall
185 Stranmillis Road
Belfast, BT9 5EE
T: (0)28 9097 5664

Contact: Roisin / Pauline
07969215184

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**Registration**

Will commence at 08:30hrs. Tea/Coffee will be available.

**Posters**

For those accepted for poster presentation - it is your responsibility to bring this with you on the day. Upon registering, you will find a number on the back of your badge. Please proceed to display your poster on the corresponding board, adhesive strips will be supplied. The recommended poster size is A1 – Portrait or Landscape (23.4 x 33.1 inches) to fit the University Boards.

**Presentations**

Oral and ‘Rapid Fire’ presentations should be emailed to audgpi@qub.ac.uk no later than close of business on Monday 2\textsuperscript{nd} March 2015.

- **If you have been accepted for an Oral presentation:**
  You will have 10 minutes to present followed by 5 minutes Q&A

- **If you have been accepted for ‘Rapid Fire’ presentation:**
  You will have 3 minutes to present, using no more than 3 slides, followed by 2 minutes Q&A

**Lunch**

Lunch is scheduled for 13:00hrs in the Isdell Courtyard. If you have advised us of any dietary requirements, these have been taken into consideration.

**AGM**

For those involved in the AGM, please proceed to Conference Room 1 for 13:30hrs sharp. You may bring your lunch to the meeting with you.

**Close:** Please remember to collect all luggage/posters etc before you depart.
Useful Numbers

Queens University

Queen’s University: A: Queen’s University Belfast, University Road Belfast, BT7 1NN  
T: +44 (28) 9024 5143  
W: http://www.qub.ac.uk/

University Maps:  
http://www.qub.ac.uk/home/TheUniversity/Location/Maps/

Queen’s Security:  
+44 (0)28 9097 5099

Belfast Map (pdf):  
http://www.stayatqueens.com/sites/media/Media,243566,en.pdf

Roisin & Pauline: M: 079 692 15184  
E: audgpi@qub.ac.uk

Hotels

Fitzwilliam Hotel: A: Fitzwilliam Belfast, Great Victoria Street, Belfast  
T: +44 (28) 9044 2080  
E: enq@fitzwilliamhotelbelfast.com  
W: http://www.fitzwilliamhotelbelfast.com/

A special rate of £115 B&B has been agreed for Thursday 5th March and  
20 rooms have been held until 16th February. As this date has now  
passed, this rate may have changed. You can however quote  
QUB/AUDGPI ref: Roisin Corr when making your booking and you might  
still receive a preferential rate, but no guarantee. This hotel is in the  
City Centre, next to Great Victoria Train and Bus Station and the  
Grand Opera House.

Malone Lodge:  
A: 60 Eglantine Avenue, MaloneRoad, Belfast, BT9 6BY  
T: +44 (28) 9038 8000  
E: info@malonelodgehotel.com  

A rate of £75pppn has been negotiated, B&B and 30 rooms have been  
held. Please quote QUB when making your booking. This hotel is in  
the University area.
Transport

Central Station (Trains):
A: 47 East Bridge Street, Belfast
T: +44 (0)28 9066 6630
W: http://www.translink.co.uk

Europa Bus Centre & Great Victoria Street Rail Station (Trains/Buses):
A: Great Victoria Street, Belfast
T: +44 (0)28 9066 6630
W: http://www.translink.co.uk

Value Cabs (Taxi):
T: 028 9080 9080

As well as being a University supplier, this company will have a fleet of taxis waiting at Central Station to meet all Dublin/Belfast bound trains. You should make your way out of the main concourse and turn right down the escalators to their rank.

Fonacab (Taxi):
T: 028 9033 3333

Other (which you will hopefully not require!)

Fire/Police/Ambulance:
In an emergency dial 999 or 18000 for text phone users
Non-emergency and general enquiries telephone number: 101

Callers from outside the UK or within the Republic of Ireland should ring + 44 28 9065 0222

Royal Victoria Hospital: 028 9024 0503

Belfast City Hospital: 028 9032 9241

And Finally.....

The online payment portal for the various programmes, membership and conference dinner is available at:

https://knock.qub.ac.uk/ecommerce/audgpi/index.php

#audgpi15

We look forward to meeting you all and hope you enjoy both your event and visit to QUB and Belfast.