



SCOTTISH PATIENT SAFETY RESEARCH NETWORK QUARTERLY NEWSLETTER

SPSRN

Scottish Patient Safety Research Network (SPSRN) is a collaboration between research teams from the Universities of Aberdeen, Dundee, and St Andrews. The aim of the Network is to enhance capacity in patient safety research in Scotland, building on two existing academic centres. In 2003, the [Patient Safety Research Group](#) was established at the University of Aberdeen. Research focuses on a wide range of issues related to patient safety (e.g. adverse event rates, non-technical skills, and safety climate) within acute as well as primary care medical environments. [The Social Dimensions of Health Institute \(SDHI\)](#), also established in 2003, is a collaborative venture between the Universities of St Andrews and Dundee. Their patient safety research focuses on clinician engagement in quality improvement; different models of quality improvement adopted in the UK, and the initiation, spread and sustainability of change. More information about the Network can be found at www.spsrn.ac.uk

July 2011

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This section provides details on select SPSRN research projects that are currently being conducted.

This week the topics featured are the Tayside Insightful Practice Project (TIPP) and High Risk Prescribing in Primary Medical Care Patients (an associated SPSRN project).

SPOTLIGHT ON:

Tayside Insightful Practice Project (TIPP). Measuring Professionalism: a System for Quality Improvement.

Dr Virginia Hernandez Santiago, Prof Peter Davey and Dr Douglas Murphy

TIPP is an innovative piece of research to measure professionalism in the undergraduate medical context. The pilot work for TIPP was the Tayside In-Practice Portfolio: a research project to inform systems of clinical governance, appraisal and professional revalidation in General Practice. The Practice measures used by TIPP included information about high risk prescribing that was made available through SPSRN funding as part of the Safety in Primary Care Work Package. TIPP attracted additional funding principally by Chief Scientist Office (£135225 for 1 year), with additional funding for associated research from both RCGP and NHS Education Scotland. GPs were asked to reflect on a variety of sources of information about their personal performance and the performance of their Practice. The success of the postgraduate project in General Practice led to a proposal to NHS Education Scotland for funding from NHS Tayside Additional Costs of Teaching (ACT) to adapt the assessment of insightful practice to undergraduate medical students. TIPP is funded for 3 years (£382,000).

We intend to collect all existing sources of student feedback, and to construct and test *insightful practice** as a composite measure of professionalism in medical students. The aim is to assist with provision of high quality credible feedback to students and to assist students in maximising their professional performance.

A secure and personalised e-portfolio will be developed to collate all existing forms of assessment of medical students in year 4 at University of Dundee Medical School, including the development of novel patient safety exercises looking at preventing errors along different blocks. TIPP is fully integrated with the broader development of an e-portfolio in the Medical School. Medical students participating in TIPP will be asked to read and react to each piece of feedback in TIPP via the project website. It will require participants to show reflection on any highlighted needs and action to address them. The students' level of engagement, insight and response to credible feedback (insightful practice) will be quantified by senior clinicians (student coaches) through student interview and remote marking. The aim of this intervention is to conduct an informal coaching session, based on the students' reactions to received feedback, to support students in their reflection on their performance. Finally, helping medical students to respond to their professional needs early in their careers will be of career long benefit and will promote deliver a better effective, safe and person-centred care.

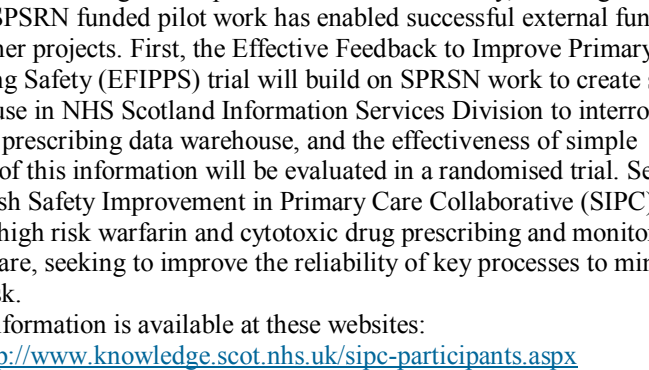
* *Insightful practice is defined as learners' engagement, insight and (where applicable) action, aided by facilitated appraisal, to react responsibly and take accountability for, personal improvement following credible independent feedback on personal performance.*

High-risk prescribing in primary medical care in patients particularly vulnerable to adverse drug events: cross-sectional population database analysis in Scottish general practice

Bruce Guthrie¹, Colin McCowan¹, Peter Davey¹, Colin Simpson², Tobias Dreischutte³ and Karen Barnett¹

1. Quality, Safety and Informatics Research Group, University of Dundee
2. Centre for Population Health Sciences, University of Edinburgh
3. Tayside Medicines Unit, NHS Tayside

In a study covering 1/3 of the population of Scotland, 19,308/139,404 patients who are particularly vulnerable to adverse drug events were prescribed high risk medications by their general practitioners that could potentially cause them harm, according to this cross sectional population database analysis of 315 practices. Wide variation between practices was not explained by patient case mix or by a range of practice structural factors and implies opportunities for improvement. The patient characteristic most strongly associated with high-risk prescribing was the number of drugs prescribed:



Next steps and links to SPSRN

Potentially inappropriate prescribing has been shown to be relatively common using various indicator sets. Existing indicator sets do not always measure prescribing of drugs most commonly associated with harm or cannot be applied in routine clinical data. Funding from SPSRN has enabled the development and testing of software to help practices to identify patients with high risk prescribing from routine clinical data in their practice management systems. The aim is to target medication review for patients receiving high-risk prescriptions, prompting the explicit application of clinical judgement to questions of appropriateness. This software is at the heart of a complex intervention to improve prescribing safety, whose impact is being tested in the Data-driven Quality Improvement in Primary Care (DQIP) funded by the Chief Scientist Office. The DQIP Cluster Randomised Clinical Trial will begin in September 2011. Additionally, building on this activity, SPSRN funded pilot work has enabled successful external funding of two other projects. First, the Effective Feedback to Improve Primary Care Prescribing Safety (EFIPPS) trial will build on SPSRN work to create software for use in NHS Scotland Information Services Division to interrogate their new prescribing data warehouse, and the effectiveness of simple feedback of this information will be evaluated in a randomised trial. Second, the Scottish Safety Improvement in Primary Care Collaborative (SIPC) is targeting high risk warfarin and cytotoxic drug prescribing and monitoring in primary care, seeking to improve the reliability of key processes to minimise patient risk.

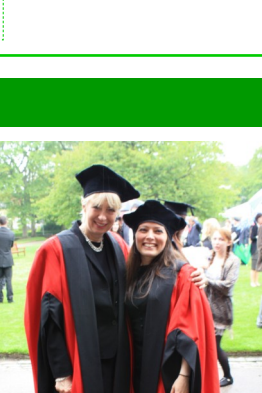
Further information is available at these websites:

SIPC: <http://www.knowledge.scot.nhs.uk/sipc-participants.aspx>

DQIP: <http://www.dundee.ac.uk/hic/news/events/mackenzie/2010/BruceGuthrie.pdf>

A SELECTION OF SPSRN NEW AND 'IN PRESS' PUBLICATIONS

- Irwin, A. Ross, J. Seaton, J. & Mearns, K. (*in press*) Retrospective analysis of DATIX dispensing error reports from Scottish hospitals, *International Journal of Pharmacy Practice*.
- Mitchell, L. & Mitchell, J. (2011) 'Pass the buzzy thing please'. Recognising and understanding information, *Journal of Perioperative Practice*, 21, 203-205.
- Reader, T. Flin, R. et al (*in press*) Team situation awareness in the Intensive Care Unit, *BMJQS*.

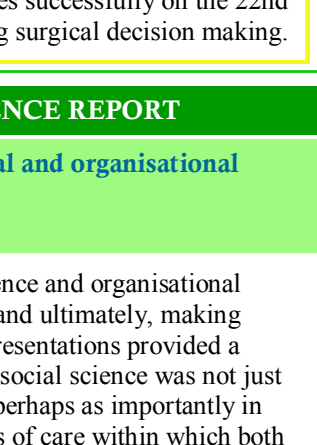


SPSRN NEWS

Dr Cakil Sarac graduated from the University of Aberdeen on July 6th with a PhD in Psychology for her thesis on hospital safety climate, pictured on the right with Professor Rhona Flin.

Dr Mica Endsley presented her work on situational awareness at the Plexus Safety Lecture, May 2011, University of Aberdeen. The presentation is available from the Industrial Psychology Research Centre website: <http://www.abdn.ac.uk/iprc/>

Professor Tanja Manser visited the University of Aberdeen from the University of Fribourg on April 28th 2011, to present her work on effective communication during postoperative handover.



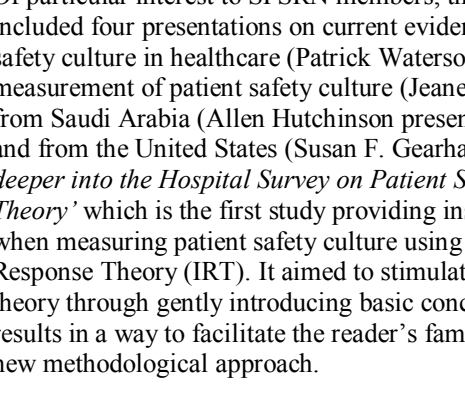
Lucy Mitchell defended her thesis on non-technical skills in scrub nurses successfully on the 22nd July 2011. Lucy will follow this with a post-doctoral project examining surgical decision making.

SPSRN INTERNAL CONFERENCE REPORT

Making health care safer: learning from social and organisational research

St Andrews, June 2011.

The conference sought to explore what social science and organisational research had to offer for better understanding of, and ultimately, making improvements in, patient safety. The rich set of presentations provided a resounding answer: plenty! Moreover, the role of social science was not just seen in developing and testing interventions, but perhaps as importantly in drawing attention to the 'taken for granted' aspects of care within which both danger lurks and potential protective practices can be found. Plenary presentations on these themes were complemented by a range of more interactive workshop sessions which showcased work from across the UK. In addition, the traditional poster sessions were greatly enlivened as presenters here had been enjoined to 'think creative' in how they captured attention, intrigued and provoked. Around a hundred delegates from academic, practice and policy environments got stuck in, and the hubbub of conversation never flagged over the full two days. Taken together, these ingredients more than delivered on what had been hoped for from the conference: a series of linked conversations that brought to the fore the potential for social and organisational research to contribute to safer healthcare. The majority of the materials presented are available for access from [The Social Dimensions of Health Institute \(SDHI\)](#)



EXTERNAL CONFERENCE PRESENTATIONS BY SPSRN MEMBERS

Healthcare Systems, Ergonomics and Patient Safety (HEPS) conference

June 2011, Oviedo, Spain

Presentation by Dr Jeanette Jackson

The HEPS conference focused on the challenges facing healthcare ergonomics in designing healthcare services, by connecting researchers, practitioners and patient advocates. Both the scientific contributions and the patient stories intertwined in the plenary and interactive sessions, and as a result, a consensus document on healthcare ergonomics and patient safety will be developed. The highlight of the conference was a keynote speech by anaesthetist Stavros Primeas, who, following a tragic accident which led to the death of a patient and nearly ended his career, developed a structured framework to aid clinicians in recognising the signs of impending incidents and how to know when to seek assistance.

Of particular interest to SPSRN members, the session on 'Patient Safety Culture' included four presentations on current evidence and future challenges in measuring safety culture in healthcare (Patrick Waterson), applying modern test theory to the measurement of patient safety culture (Jeanette Jackson), as well as case studies from Saudi Arabia (Allen Hutchinson presented on behalf of Mamdooh Alonazi) and from the United States (Susan F. Gearhart). Dr Jackson presented '*Probing deeper into the Hospital Survey on Patient Safety Culture using Item Response Theory*' which is the first study providing insights into single item performance when measuring patient safety culture using the modern test theory known as Item Response Theory (IRT). It aimed to stimulate delegate's interests in modern test theory through gently introducing basic concepts of IRT and presented the study results in a way to facilitate the reader's familiarisation with such a complex and new methodological approach.

Oviedo was an excellent venue to host HEPS and its welcoming atmosphere certainly favoured the interactions between ergonomists, clinicians and patients



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