

Scottish Health Informatics Programme



July 2011

SHIP Annual Retreat 2011



The Data Linkage Dragons Den: our three Sea Dragons—Professor Aziz Sheikh, Dr Roma Armstrong and Professor Peter Helms—not looking very frightening.

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This year's SHIP retreat was held from 19th-20th May at the Dunblane Hydro Hotel. Numbers were up on last year with sixty delegates attending. Professor Frank Sullivan gave an entertaining and nautically themed keynote address. His topic was "contacting patients for research based on their electronic data", specifically with respect to the Scottish Health Research Register (SHARE).

This was followed by a "Dragons' Den" event inspired by the television series where budding business people try to convince venture capitalists to invest in their fledgling company. Our Sea Dragons were guarding a hoard of SHIP money, but a promising pilot study or studies involving data linkage could persuade them to part with a maximum of £5,000. The intention being to provide useful seed money to early career researchers. The intrepid winners were Lindsay Govan and Nayha Sethi who won £2,000 and

£3,000 from the dragons respectively.

Lindsay will be using her prize money to assess the feasibility of collecting quality of life data in a variety of clinical settings. Nayha will be using hers to carry out a study which will investigate whether or not the ship model and approach could provide wider benefits in cross sectoral linkage to local authority datasets particularly education.

The second day saw a session on the plans for the SHIP infrastructure, and included talks by Prof Simon Maxwell on the Centre for Adverse Reactions to Drugs Scotland (CARDS) and by Professor Raj Bhopal on his Ethnicity and Health linkage study. A session on public engagement with contributions from SHIP and CHIMES (Child Medical records for Safer medicines) closed the day.

Slides are available on the "research login" pages of the SHIP website. Contact Violet Warwick, SHIP manager if you have difficulty.

6th Mackenzie Lecture Day

This year's Mackenzie Lecture was held on Thursday 26 May 2011 as part of an all day programme of lectures hosted by the Health Informatics Centre, University of Dundee. A Mackenzie Lecture is held every year in honour of Sir James Mackenzie, a Scottish GP who pioneered the study

of cardiac arrhythmia. He initiated the first general practice research group in St Andrews in 1918. This, the 6th Mackenzie Lecture, was delivered by Prof John Halamka and was introduced by Derek Feeley (Acting Director-General Health & Chief Executive of NHS in Scotland).



Prof John Halamka

Prof Halamka spoke on "Connecting Patients, Providers, and Payers: a discussion of how \$27 Billion will be spent to improve the quality, safety and efficiency of Healthcare in the US through strategic implementation of information technology."

John Halamka has recently been made a Harvard Professor as well as being Chief Information Officer of Harvard Medical School. He is also CIO of Beth Israel Deaconess Medical Center, Chairman of the New England Healthcare Exchange Network (NEHEN), Chair of the US Healthcare Information Technology Standards Panel (HITSP), co-Chair of the HIT Standards Committee, and a practicing Emergency Physician.

Around 120 people from across Scotland attended the Mackenzie Lecture. It was preceded in the

morning by a series of talks on 'Supporting clinical research in Tayside and Fife'. In the afternoon a smaller group of participants attended the SHIP Technical Workshop, 'Supporting e-health records research in Scotland'. Presentations were given by SHIP researchers on the latest developments and by Steve Kendrick from NHS ISD who spoke on patient based prescribing.

John Halamka's slides and a video of the Lecture are available to view on the SHIP website: <http://www.scot-ship.ac.uk/halamka-video>

Prof Halamka has recorded his thoughts about his visit at <http://geekdoctor.blogspot.com/> Including his impressions of whisky tasting and hill walking with SHIP members.

Introducing Stephen Nyangoma

Stephen Nyangoma received his BSc (Hons.) in Mathematics and Statistics and MSc (Statistics) from the University of Nairobi (Kenya). Then at University of Auckland (New Zealand) he completed a bridging MSc (Statistics and Statistical Computing) and in May 2000, a PhD in Statistics under the supervision of Professor George Seber, FRS.

He was in the first class to be taught R as a statistical computing platform, where his Lecturers included both Robert Gentleman and Ross Ihaka, who invented R statistical package. He has had lectureships at the Universities of Nairobi and Witwatersrand in Johannesburg. There followed Bioinformatics positions at the University of Groningen, where he helped to set up a

new Bioinformatics Institute, and at Amsterdam Medical Centre, University of Amsterdam.

Stephen came to the UK in 2006 to join the CR UK Clinical Trial Unit at the University of Birmingham as a Clinical Proteomics Biostatistician. In February 2010, he joined Professor Helen Colhoun's epidemiology group at University of Dundee as a Biostatistician. Here he is developing informatics and statistical tools for understanding the epidemiology of diabetes sight-threatening complications using the Scottish national data from the Diabetes Retinopathy Screening (DRS) programme and associated clinical data from primary care. He says that his current position offers him excellent opportunity to handle real-life large-scale medical records data. Stephen has deter-

mined the prevalence of diabetic retinopathy, and of those needing laser treatment, or treatment for proliferative retinopathy, or slit-lamp operations. He has completed work to establish the prevalence of and risk factors for early diabetic eye disease. The development of a strategy for determining optimal screening intervals for a diabetic retinopathy screening programme is Stephen's present challenge. The complication with this problem is that the decision on when to rescreen a person is dependent on a person's past retinopathy history and this induces time-dependent confounding which are not adequately adjusted for using time-dependent Cox proportional hazards model. Stephen is currently working on ways to overcome this problem.



Dr Stephen Nyangoma

Recent Diabetes Publications from SHIP

The SHIP Epidemiology group in collaboration with the Scottish Diabetes Research Network has recently published two papers based on work using the SCI-DC database, a real-time clinical information system of almost all diabetes patients in Scotland.

- Effect of Socioeconomic Status on Mortality Among People With Type 2 Diabetes: a study from the SDRN epidemiology group *Diabetes Care* 2011, 34(5):1127-32 lead author Sarah Wild
- Inpatient costs for people with type 1 and type 2 diabetes in Scotland: a study from the SDRN epidemiology group *Diabetologia* 2011, 54(8):2000-2008 lead author Lindsay Govan

The socioeconomic status paper links SCI-DC with mortality records and concludes that socioeconomic status modifies the association between type 2 diabetes and mortality so that relative risk for mortality is lower among more deprived populations.

The inpatient costs paper links SCI-DC with hospital admissions and concludes that diabetes inpatient expenditure accounted for 12% of the total Scottish inpatient expenditure, whilst people with diabetes account for 4.3% of the population. Of the modifiable risk factors, HbA(1c) was the most important driver of cost in type 1 diabetes.

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A Blueprint for Health Research in Scotland

Plans for the SHIP infrastructure are being defined in a blueprint document that is currently being edited by the SHIP Management Group. It will begin by outlining opportunities for health records research in Scotland and the value of SHIP to Scotland. It will go on to describe the plans for a collaborative network of safe havens how the SHIP Research Infrastructure and Governance Infrastructure will work in practice. It is hoped that a draft will be available for wider comment in September 2011.

SHIP Conference—Draft programme available

A draft programme is now available for the next SHIP biennial conference "Exploiting Existing Data for Health Research". The conference will be held on 9th - 11th September 2011 at the University of St Andrews and is designed for researchers and practitioners interested in record linkage and the use of routine health data in their research.

The plenary speakers are:

- **Dr Harry Burns** MPH FRCS (Glas) FRCP(Ed) FFPH, Chief Medical Officer for Scotland
- **Professor Paul Burton** MD, C. Stat, FFPH Professor of Genetic Epidemiology, Departments of Health Sciences and Genetics, University of Leicester.
- **Professor Sir Rory Collins** FMed Sci FRCP, Chief Executive and Principal Investigator of the UK Biobank and co-director of the University of Oxford's Clinical Trial Service Unit & Epidemiological Studies Unit
- **William W. Lowrance** PhD, Consultant in Health Research Ethics and Policy, La Grande Motte, France

The deadline for submission of abstracts has now passed. The pre-conference workshop is now fully booked. Further details on the conference and a draft programme are now available from the SHIP website <http://www.scot-ship.ac.uk/conference-2011>

Registration for conference is now open on the University of St Andrews online shop: <https://onlineshop.st-andrews.ac.uk/> Please direct any enquiries to ship@st-andrews.ac.uk



St Salvator's Chapel,
St Andrews