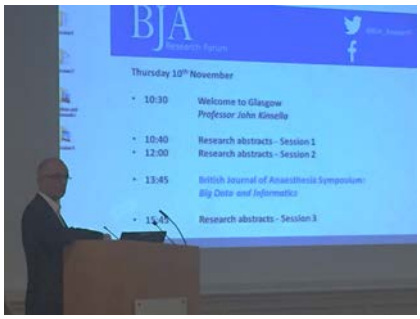
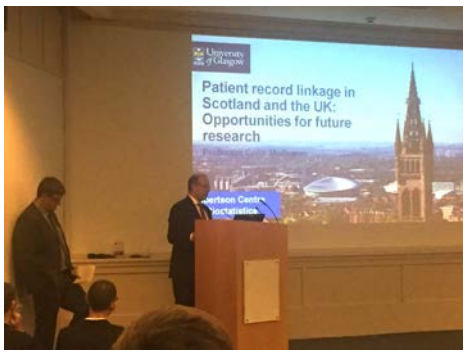
BJA RF Golden Jubilee Conference Centre, Glasgow
10th & 11th November 2016

Meeting report

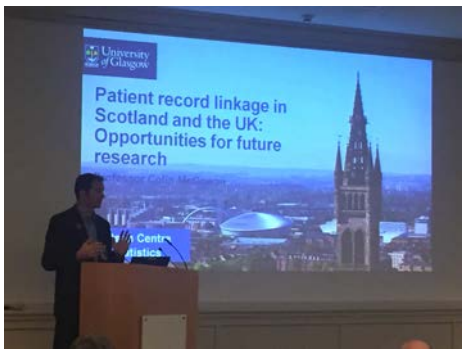


Introduction from local organiser Dr Ben Shelley with a welcome to Glasgow from Prof John Kinsella, our local Anaesthesia Chair. Prof Kinsella outlined how research is increasingly important for students and trainees. BJARF President Prof Phil Hopkins highlighted how our meetings can provide a forum and focal point for collaboration, presentation and discussion for topical research in anaesthesia and related specialities.

Following a varied open research abstract session, the afternoon BJA Symposium focussed on the theme of '**Big data and informatics'**.



First, Professor Colin McCowan explained a little about his work as Professor of Health Informatics at the University of Glasgow. Prof McCowan leads research at the Farr Institute for Health Informatics Research, a UK wide research institute linking 21 academic institutions. Whilst the Farr institute does not own or control data, the Institute has been challenged to collaborate in order to position the UK as a world leader in health informatics research. The Farr Institute mantra of "*Collect data once, use it often*" can be applied to our clinical problems and fuel meaningful research in Anaesthesia and its related specialities. More information is available at www.farrinstitute.org.



Next up, Dr Chris Hawthorne from the Institute of Neurological Sciences at the University of Glasgow explained how we can bridge the gap between healthcare data and big data analysis. Chris explained what 'big' means - Exabytes and Petabytes of data are big enough to keep you in MP3 music files for 1,000 years! Don't tell your teenage kids!

Chris continued the themes of the data session, exploring the technical infrastructure, analytical expertise, security and research ethics required to interrogate and use these data appropriately. Opportunities include potential collaborations with Google DeepMind Healthcare and others with the analytical expertise and capacity and capability to crunch the numbers. ICU specific Multi-parameter Intelligent Monitoring in Intensive Care (MIMIC). These databanks

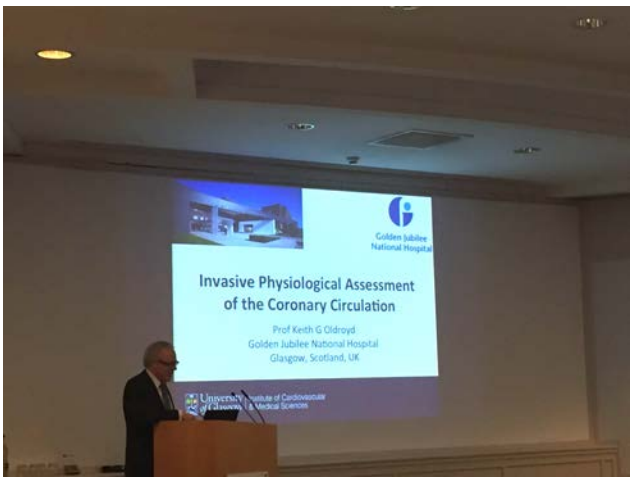
include huge stores of waveform and clinical data, and are able to mined for project as varied as validating waveform cardiac output monitoring to detecting when blood sampling is occurring (due to small drops in invasively monitored arterial pressure).

Dr Hawthorne finished up by detailing Chart-Adapt. Here, rapid real-time collection of physiological data that is automatically extracted, de-identified and then integrated into analytical algorithms. Chris demonstrated how real-time clinical physiological data can be processed through research algorithms with the potential to guide clinically relevant end point, such as Cerebral Perfusion Pressures in brain injury. For more information, see http://gtr.rcuk.ac.uk/projects?ref=102113.

The afternoon session continued with more clinically focussed research projects from all around the UK. Throughout the meeting, abstracts were presented by a wide range of anaesthetists, scientists and students, including medical students, Foundation Trainees, Speciality Trainees, Consultants and even a Professor or two! The standard BJARF format was 7 minutes of presentation followed by 6 minutes of questioning from a very educated and engaged audience. Successfully presented abstracts were defended and adjusted where appropriate prior to immediate editing by Professor Lambert for publication in the British Journal of Anaesthesia.

Following the conclusion of day 1, delegates were treated to a great meal at the Conference Centre followed by an entertaining whiskey tasting session, led by Profs Nigel Webster and Kyle Pattinson. Nobody can remember what happened after that! The AGM kicked off day 2 with the election of new Council Members (Ben Shelley and Kate Warnaby) and the BJARF's first female president, Professor Helen Galley. Thanks was offered to outgoing Council members Nigel Webster and Kyle Pattinson, along with tributes to Prof Phil Hopkins, who has led the transition from Anaesthetic Research Society into the revitalised BJA Research Forum.

Day 2 keynote was local Professor of Cardiology Keith Oldroyd. Keith presented the history of assessment of the coronary circulation, from landmark papers of the 1970's that 'eye balled' the lesions in the coronary arteries through to physiologically-based assessments that highlighted the limitations of these practices. The concept of coronary flow reserve has been challenged by Fractional Flow Reserve (FFR), a concept that developed as a result of advances in catheter technology that miniaturised accurate measurement of flow and pressure. Professor Oldroyd discussed his validation of these techniques using stress perfusion MRI techniques instead of historical treadmill or dobutamine stress tests.



Landmark papers such as the NEJM FAME trial using FFR guided PCI instead of angiography-guided PCI, essentially demonstrating that using the invasively measured flow and pressure indices, PCI could be targeted to reduce stent deployment to only physiologically significant flow lesions. The outcomes are fewer interventions, lower costs and better patient outcomes, up to 5 years post-procedure. The challenge is how to get UK cardiologists who perform around 250,000 angiograms per year to increase the use of FFR and physiological measurements from the current 10% to routine practice.

The rest of the day was dedicated to the core business of cutting edge research abstract presentations. These continued to come thick and fast from all around the UK, from a wide range of students, trainees and consultants.

The next meeting will be the BJA Research Forum Spring Meeting at the Royal College of Anaesthetists, London. The meeting will be held on 5th & 6th April 2017. Abstract deadline will Friday 24th February, so start planning your submissions. Good luck!