

Newsletter Autumn 2019

CaHRU receives university team achievement award for research 2019 for fifth successive year

Members of CaHRU received the team achievement award for research for the fifth successive year on behalf of the team at the University of Lincoln awards ceremony at the Engine Shed, Brayford Campus on 20 November 2019. The team includes Prof Niro Siriwardena (director), Prof Graham Law, Dr Zahid Asghar, Dr Coral Sirdifield, Dr Stephanie Armstrong, Dr Murray Smith, Dr Julie Pattinson, Dr Joseph Akanuwe, Dr Elise Rowan, Dr Sarathchandra Kumarawansa, Dr Iresha Jayawickrama, Viet-Hai Phung, Despina Laparidou, Greg Whitley, and Sue Bowler.



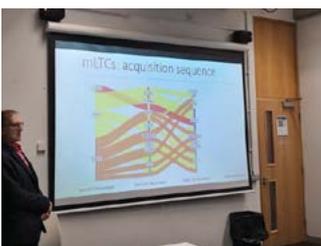
The team have over 30 active studies covering the whole spectrum of research methods. These include: major clinical trials investigating sleep restriction therapy for primary care for insomnia (HABIT); observational studies investigating diabetes emergencies in patients in care homes, ambulance care for seizures, and performance of doctors in the MRCGP licensing exam; qualitative designs, for example exploring perceptions of professionals and patients on child obesity; surveys, for example on experiences of people with Guillain-Barre syndrome; mixed methods studies of GPs working in emergency departments and healthcare for offenders on probation; and systematic reviews, e.g. psychological therapies for insomnia in autism and psychological therapies for insomnia related to tinnitus.

CaHRU have had 24 papers published or accepted for publication in leading journals in the past 12 months including landmark publications covering research developing new indicators for ambulance services, glyceryl trinitrate in stroke, the effects of online treatments for insomnia, cost-effectiveness of smoking therapies in pregnancy, and the effects of diabetes in pregnancy in major journals such as the Lancet, JAMA Psychiatry, Diabetes Care, Addiction, Stroke, Heart and Medical Education. Over the same period CaHRU have led or are named collaborators in research or research-related projects valued over £9 million, exceeding a 60% success rate in applications with over £1 million of funding awarded to Lincoln. The main project funders over the past year have been the National Institute for Health Research (NIHR), the Medical Research Council (MRC) and Health Education England.

CaHRU's impact derives primarily from a focus on studies that make a difference to service users, carers and care provided by the health service. The work has increased the university's reputation, media interest in its research and standing nationally and internationally.

CaHRU/LIH Improvement Science and Research Methods Seminar: The journey to multimorbidity in an inner city community – Dr Mark Ashworth

The CaHRU/LIH Improvement Science and Research Methods Seminar on 13 November 2019 was given by Dr Mark Ashworth from Kings College London. Dr Ashworth trained at Southampton University and has been a GP for 30 years in an inner city GP training practice with a parallel career in academic primary care. His doctorate was based on quantifying changes in prescribing metrics. He has developed research interests in primary care mental health, multimorbidity (especially the intersection of mental and physical illness) and antibiotic prescribing.



In 1999, Dr Ashworth chaired the research group that developed a patient generated mental health outcome measure called 'PSYCHLOPS' (Psychological Outcome Profiles). This was originally intended to focus on patient generated outcomes as opposed to the more generic outcomes measured by standard (standardised) measures. In 2015, PSYCHLOPS was taken up by WHO because of its 'cultural neutrality' as part of a WHO mental health programme in conflict zones. It continues to be used in conflict zones across the world.

The seminar, titled 'The journey to multimorbidity in an inner city community', presented novel methods using patient-level primary care data to study multimorbidity in an inner London community. Dr Ashworth illustrated the 'alluvial plot', used in Charles Minard's Map of Napoleon's Russian Campaign of 1812, to unravel some of the complexities of multimorbidity including the rate of progression of multimorbidity, the characteristics of rapid progressors, and the role of social deprivation and ethnicity in predisposing to multimorbidity. The plots were used to show the progression from and initial long-term condition to multimorbidity and relative roles of social deprivation and cardiovascular risk factors as the main determinants of multimorbidity.

CaHRU's research on differential attainment in postgraduate exams at Birmingham trainer's conference 2019



CaHRU's latest research on differential attainment was presented this November 2019 at Birmingham GP Trainer's Conference at the Hilton Warwick Hotel, Stratford on Avon. Prof Niro Siriwardena of CaHRU who is also R&D lead for assessment at the RCGP presented 'The evidence surrounding the clinical skills assessment (CSA) and applied knowledge test (AKT) and differential attainment.

The lecture explored the issue of differential attainment in postgraduate medical licensing which remains an important and controversial issue with important ethical and legal implications for exams and educators. The focus has previously been on the possibility of bias against black, Asian and minority ethnic (BAME) doctors, rather than sex differences or disability, but the talk examined the wider problem of differential attainment through explanatory factors such as educational experience, relationship with educators and peers, and psychological influences such as motivation, insight and expectations.

The talk went on to describe results of recent database studies exploring the issue of candidates with dyslexia and questionnaire studies exploring educational and psychological factors which showed that some aspects of educational experience and insight were significantly associated with performance.

CaHRU at British Sleep Society 2019

Profs Graham Law and Siriwardena, together with Dr Simon Durrant in Psychology were at the recent British Sleep Society conference, Birmingham Sleep 2019, which took place at the Birmingham Hilton Metropole, part of the National Exhibition Centre. Prof Law and Dr Durrant attended as part of the conference organising committee and as the British Sleep Society's outgoing and new treasurer.

Professor Siriwardena attended at the invitation of the BSS to give a talk titled 'Primary care for insomnia – past, present and future'. He spoke about CaHRU's previous research on insomnia and sleeping tablet use in primary care. He went on to describe the team's qualitative studies of patients and primary care practitioners and implementation of cognitive behavioural therapy for insomnia (CBTi) by primary care staff as part of the Resources for Effective Sleep Treatment programme funded by the Health Foundation. He also described more recent studies of digital CBTi funded by the EPSRC and the ongoing HABIT trial of sleep restriction therapy delivered by practice nurses in Oxford, Manchester and Lincolnshire. Better training for primary care professionals and psychologists in sleep therapy, greater availability of CBTi via digital platforms, and a stepped care approach (from self-care, to primary care and community psychological therapies and specialist care) were presented as a possible future means of improving access to sleep treatment.

At the conference dinner Prof Law was acknowledged for his work on the BSS committee and as treasurer over the previous three years. Following the conference dinner on Friday evening, the event ended on Saturday with a further round of sessions.



CaHRU top off their year with pizza action



The CaHRU team recently took time out at their away day to practice the art of pizza making at a Newark restaurant. This was an opportunity to try out individual and team working skills and to celebrate achievements over the past year.

Team members were shown how to make a pizza with a variety of toppings and given an opportunity to try this out.

Always ready for a friendly contest of their newly acquired skills the group were divided into two teams who competed in making the fastest and/or best pizza.



Symbiotic relationships to improve the healthcare system in Lincolnshire

A meeting to discuss 'Symbiotic relationships to improve the healthcare system in Lincolnshire' was hosted by NHS England and included representatives from the University of Lincoln (including CaHRU, the Lincoln Institute for Health and the Lincoln Medical School) and Lincolnshire NHS Trusts, took place on 30 October at the Hilton DoubleTree. The meeting was designed to discuss collaborative working and innovation to maximise improvements in patient care and system efficiencies across the county.



A welcome by Prof Andrew Hunter, Deputy Vice Chancellor for Research and Innovation at the University of Lincoln, was followed by Prof Aly Rashid, Medical Director for systems improvement and professional standards at NHS England Midlands who discussed the new regulatory system for the NHS and particular issues faced by the county. In the next session on system challenges and opportunities there were talks on innovation and system improvement in action from Margaret Woolley from the Academic Health Science Network (AHSN) and Karen Glover, Dr Emma Rowley and Prof Azhar Farooqi from the new NIHR Applied Research Collaboration (ARC) East Midlands. A session on supporting systems to improve clinical performance included talks from Prof Danny McLaughlin, Associate Dean of Medicine at the new Lincoln Medical School.

A discussion of the Lincolnshire system included talks from each organisation including acute care (Dr Andrew Simpson, Deputy Medical Director at United Lincolnshire Hospitals NHS Trust), Community Care (Craig McLean, Deputy Director of Operations, Lincolnshire Community Health Services NHS Trust), commissioning (John Turner, Senior Executive Lead, at Lincolnshire Sustainability and Transformation Partnership and accountable officer for the Lincolnshire CCGs), primary care (Dr John Parkin, Executive GP at Lincs West CCG and Dr Sunil Hindocha, Clinical Director at Imperium Primary Care Network). The presentations were followed by a table discussion on putting collaboration into action focussing on organisational priorities, collaborative working, system efficiencies and innovation. The meeting ended with a series of pledges on future action.

Dyslexia associated with reduced pass rates in MRCGP Clinical Skills Exam but not Applied Knowledge Test

research paper

A recent study from a team at CaHRU and the RCGP, published in *Medical Education*, 'Performance in candidates declaring vs not declaring dyslexia in a licensing clinical exam' showed that trainee doctors with dyslexia were less likely to pass the clinical skills assessment, a component of

Performance in candidates declaring versus those not declaring dyslexia in a licensing clinical examination

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the licensing exam for general practice. This contrasted with an earlier study which showed that doctors were no less likely to pass the computer based Applied Knowledge Test. The Clinical Skills Assessment (CSA) is an objective structured clinical exam (OSCE) which tests a doctor's ability to gather information, make evidence-based decisions, and communicate effectively with patients and colleagues.

The study was led by researchers from the Community and Health Research Unit (CaHRU) in collaboration with a team from the RCGP, and examined pass rates of 20,879 candidates who had taken the exam from 2010 to 2017 of whom 598 declared dyslexia. Findings showed that once other factors linked to exam success such as number of exams sat, initial pass mark, dyslexia, sex, ethnicity and country of primary medical qualification were taken into account, those who declared dyslexia were less likely to pass, and fared even worse if declaring dyslexia was delayed after failing at least once.

Interestingly, the findings of the study, which is the first to examine pass rates in the CSA, differ from a previous study of the Applied Knowledge Test (AKT), a multiple choice component of the MRCGP, which found that dyslexia did not reduce pass rates for those declaring their learning difficulty prior to taking their exams. The study also found that candidates who declared dyslexia were more likely to be male (47.3 per cent compared with 37.8 per cent of females) and more likely to have gained their primary medical qualification outside the UK. Once other factors were taken into account, sex was not shown to have an effect on pass rates and trainee doctors from minority ethnic backgrounds were no less likely to pass than white British or Irish candidates. The study has highlighted the need for further research into the aspects of the CSA exam that candidates with dyslexia find more difficult and how these challenges could be addressed to better support candidates. A podcast of Prof Niro Siriwardena discussing the study and its implications with *Medical Education's* editor, Prof Kevin Eva, is also available at the journal website.

CaHRU/LIH Improvement Science and Research Methods Seminar: Researching rare diseases



The December 2019 CaHRU/LIH Improvement Science and Research Methods Seminar was given by Despina Laparidou, Dr Joseph Akanuwe and Prof Niro Siriwardena of CaHRU on researching rare diseases. A rare disease is defined as a life-threatening or chronically debilitating disease affecting 5 or fewer people in 10,000. There are between 6,000 and 8,000 known rare diseases and around five new rare diseases are described in the medical literature each week. In the UK, 1 in 17 people or 6% of the population are affected by a rare disease which means 3.5 million people will be affected at some point in or throughout their lives.

Rare diseases as a group are therefore common and important, not only for specialists, but also for general practitioners, who will see people with rare conditions often. The problem for patients with rare diseases is that they are often misdiagnosed, poorly understood and the conditions are under-researched. The seminar considered how to research such conditions in a way that will lead to improving care and experience of care of those affected. The speakers discussed the problem of rare disease, the challenges of researching these and how these challenges were addressed in a recent series of studies on Guillain-Barré syndrome conducted by a team from CaHRU, LIH, Lincoln International Business School and the School of Psychology.

Possible methods vary depending on funder requirements, clinical condition, previous research, knowledge gaps and agreed aims of the research. The methods described included a metasynthesis of qualitative studies, a new qualitative study and an online questionnaire study all exploring the experiences of care for people with Guillain-Barré syndrome, Chronic Inflammatory Degenerative Polyneuropathy and other variants of these condition. In order to be successful, such studies need to use methods that involve existing data and accessing participants remotely, particularly if resources are limited. It was emphasised that working with patient groups and charities could help recruit participants and in future linking with national experts was important to develop such studies

Publications

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