

Newsletter Summer 2020



Vanessa Botan joins CaHRU as a medical statistician

Vanessa Botan joined CaHRU this June 2020 as a Post-Doctoral Research Associate in Medical Statistics to work on national NIHR funded studies of [Community First Responders](#) and studies using [ambulance data](#) investigating implementation and improvement as part of the NIHR ARC East Midlands. She aims to use her research experience and statistical skills to contribute to these and other projects in the area of pre-hospital emergency care.

Before joining CaHRU, Vanessa completed her PhD at the University of Sussex, where she used psychological, physiological, and neuroscientific methods to investigate the link between vicarious pain perception and bodily consciousness. Prior to her PhD, she worked as a research assistant in social and clinical psychology. Vanessa also gained an MSc

in Cognitive Neuroscience and a BSc in Biomedical Sciences and she is an associate fellow of the Higher Education Academy.

Her background is multidisciplinary and diverse. She has developed expertise in statistical data analyses and research methods across various fields including biomedical sciences, neuroscience, and clinical and social psychology. Her research resulted in several journal publications and conference talks. Her ongoing academic interests include medical statistics and intervention based research. She intends to use her versatile research experience in future projects in order to inform better practices in the health and social care sector.

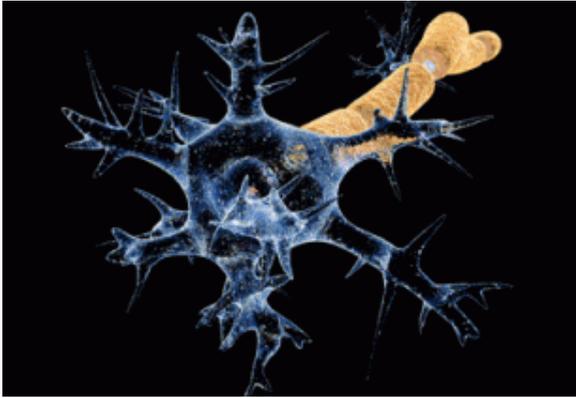
CaHRU seminar series: Use of spatial epidemiological methods to enhance understanding of epidemics

The June CaHRU Improvement Science and Research Methods seminar was given online by Professor Frank Tanser, global professor in rural health and social care and director of the Lincoln International Institute for Rural Health. He is an epidemiologist whose research has focused on important public health problems in rural populations. He was a founding member and leads a Wellcome Trust and Howard Hughes Medical Institute funded group in the Africa Health Research Institute which aims to seek cures for HIV, TB and related diseases in low- and middle-income countries.



Professor Tanser's talk, entitled 'The use of spatial epidemiological methods to enhance understanding of epidemics', focused on the presentation of case studies of the use of spatial epidemiological methods to understand the evolution of infectious disease epidemics from his work in rural Africa over the last 20 years. The webinar began with an overview of what epidemiology is and the rationale behind using spatial epidemiological methods to help us understand the spread of infectious disease epidemics. Frank then discussed the HIV epidemic in Africa, presenting data from his own seminal work, and how we can use scan statistics to perform geographical surveillance of a particular disease and work out whether a disease is randomly distributed over space, over time, or over space and time. Frank also talked about his work on urogenital schistosomiasis and finished his webinar with a quick description of plans for future work using spatial epidemiological methods.

The webinar, the first CaHRU seminar to be conducted online, was very well attended and provided a great introduction to the use of spatial epidemiological methods and how they can help us understand the evolution of infectious disease epidemics and pandemics, such as COVID-19. To hear the talk click [here](#).



Experiences of people with Guillain-Barré syndrome from illness to recovery

The latest research from CaHRU, [*Exploring the experiences of having Guillain-Barré Syndrome: a qualitative interview study*](#), was published in the international journal, *Health Expectations*, in July 2020. The study, funded by the GAIN charity and led by Prof Niro Siriwardena, involved a collaboration between Dr Joseph Akanuwe, Despina Laparidou of CaHRU, Dr Ffion Curtis from Lincoln International Institute for Rural Health, Dr Jennifer Jackson (Lincoln International Business School) and Professor Tim Hodgson (School of Psychology).

Guillain-Barré syndrome (GBS) is a rare condition which rapidly affects the nerves often leading to complete paralysis. Most people fully recover over a period of two years or longer, but some will experience longer physical, psychological or social problems. The study team sought, for the first time, to explore the experiences of people with GBS in the UK through their whole illness journey from onset to recovery using qualitative interviews in 16 volunteers with a previous diagnosis of GBS of varying experiences due to age, sex, geographical location, marital status, time since diagnosis and length of hospital stay.

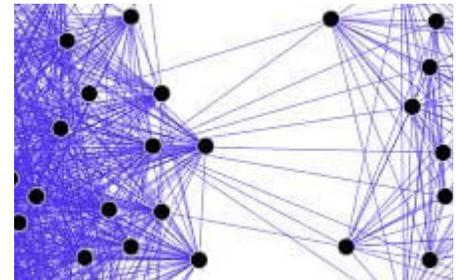
The study found that participants valued early diagnosis. They reported varying the experiences of inpatient care some positive while others were negative. There was an emphasis on the importance of active support for recovery, the need for communication throughout the course of the illness and a need for greater awareness, knowledge and provision of information by healthcare staff. Finally, those affected described their, often difficult, journey to achieving function which often led to a need to accept limitations. The study will contribute to understanding the experiences and support needs of people recovering from GBS.

By Prof Niro Siriwardena

CaHRU seminar series: Actor Network Theory and health research

The latest in the seminar series was given on 15 July 2020 by Dr Brian Crosbie, senior methods adviser for NIHR East Midlands Research Design Service and a sociologist with an interest in science and technology studies. His PhD concerned nurses' understanding and use of technology in intensive care and he has written on the social shaping of AED technology. As a qualitative researcher he has worked on stroke rehabilitation, health technology and public use, and arts in health and community settings.

The seminar introduced Actor-Network Theory (ANT), a set of sensitising concepts which can be used to understand the relations between social and technological spheres of practice. ANT argues that social activity is mediated by technological objects, where what we might define as a patient, nurse, or paramedic (social humans) is in fact a 'punctuation point' in heterogeneous networks of both 'human' and 'technical' objects. Thus, what we might describe as autonomous Actors, comes as a result of the network stability of myriad objects. Fundamentally, ANT attempts to reframe human sociality by distributing agency to both technology and humans in socio-technical worlds. Calling for detailed ethnography, ANT requires researchers to 'follow the actants'. To sense who is pulling things together in, for example, healthcare networks.



After an overview of ANT, Brian went on to discuss some of the framing concepts: heterogeneity, translation, network alliances, performativity, presenting examples of ANT research, including his own work in intensive care nursing and Automated External Defibrillator technology. The seminar concluded by considering, briefly, how ANT might inform health intervention development by helping to understand complexity in complex health interventions, how interventions develop, and the pathways by which they are implemented, spread or fail.

If you would like to join the September seminar which will be given by Dr Paul Leighton and takes place on 30th September 11 - 12.00, contact Sue Bowler sbowler@lincoln.ac.uk The September seminar is entitled "What worked for us in which circumstances, and what didn't; reflections upon incorporating a realist evaluation within a clinical trial".



Paramedic PhD

Effective management of acute pain in children by Emergency Medical Services

The latest in a series of articles from [Greg Whitley's doctoral studies](#) was published in August 2020 in the Journal of Child Health, '[The predictors, barriers and facilitators to effective management of acute pain in children by emergency medical services: a systematic mixed studies review.](#)' Greg was awarded a prestigious doctoral studentship from the National Institute for Health Research Applied Research Collaboration and Health Education East Midlands to undertake his studies full time at CaHRU.

In this new study, from over four thousand studies eight quantitative and five qualitative studies were included. Effective pain management was associated with younger, male children with pain due to trauma and administered analgesics. Barriers and facilitators to effective pain management in paramedics included internal factors (fear, clinical experience, education and training), external influences (relatives and colleagues) influences and features such as the child's experience of event, pain assessment and management.

During his tenure as a PhD student Greg set up [Paramedic PhD](#) which is an international registry of doctorates in the field of paramedicine which already has 168 doctoral studies from 21 countries [registered](#) as completed or in progress. Greg is also co-editing a text on research methods Prehospital Research Methods and Practice with Niro Siriwardena. Greg continues to work as a paramedic at East Midlands Ambulance Service NHS Trust and recently took up a new post as a lecturer in paramedic science at the University of Lincoln where he will continue to develop his EMS research.



Prof Niro Siriwardena

Maximising positive mental health outcomes for people under probation supervision



Dr Coral Sirdifield (CaHRU, University of Lincoln), and Professor Charlie Brooker (Royal Holloway, University of London) have produced an Academic Insights report for Her Majesty's Inspectorate of Probation, which was published on the 13th of August 2020.

The report provides an overview of the (limited) research evidence base on the mental health needs of people under probation supervision, demonstrating that there is a high prevalence of mental illness in this population when compared to the general population. It also outlines the National Probation Service's commitment to improving the health of people under supervision, and the reasons why it is important to maximise positive mental health outcomes and ensure equivalence of care for this group.

The main body of the publication draws on recent reviews of the literature to articulate the current barriers to maximising positive mental health outcomes for those under probation supervision, potential enablers, and potential models of practice to explore. Potential enablers include improving commissioning processes and provision for complex needs, improving access to data and training, improving GP access, and investing in research and evaluation.

We hope that some of the data and ideas contained in this publication will support beneficial developments in practice in the health and justice field in the future. The full report can be accessed here: <https://www.justiceinspectorates.gov.uk/hmiprobation/wp-content/uploads/sites/5/2020/08/Maximising-positive-mental-health-outcomes-for-people-under-probation-supervision.pdf>

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Funding

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