



WELCOME! FROM THE CENTRE LEAD

Welcome to the Summer edition of our MCHE Newsletter!

The University of Manchester is beginning to open its doors more widely to research and teaching staff in early September. For many of us in MCHE, this will be the first time we will be back in the office since March 2020. We all intend to adopt some form of 'hybrid-working' using Zoom to maintain existing research contacts and form new research collaborations to reduce the impact of travel. We are all very much aware of disastrous world events including devastating wild fires and the situation in Afghanistan. Our thoughts go out to people living through these events and friends and families watching from afar.

In this newsletter we describe some new projects and ongoing projects that are starting to publish exciting results. We welcome two new members of staff (Aleix Rowlandson and Luke Paterson) and congratulate two existing members of MCHE who have moved into new positions (Anna Donten and Alex Thompson). We also congratulate Leonie Penner who has successfully defended her PhD thesis and Stuart Wright who is a dad for the second time. In September, registration opens for the next (online) meeting of the Methods for the Economic Evaluation of Diagnostics (MEED) research forum that focuses on the role of health economics in a global pandemic – lessons learnt from COVID-19.

Very best wishes from all of us in MCHE and we hope that you enjoy the last vestiges of the summer temperatures.

Katherine





NEWSLETTER

IN THIS ISSUE

- Digital Care Homes Project
- Homelessness linked to emergency hospital admissions
- Methods For the Economic Evaluation of Diagnostics (MEED) 2021 Research Forum
- Student spotlight: Leonie Penner

CONTACT US

Manchester Centre for Health Economics (MCHE) Division of Population Health, Health Services Research and Primary Care Faculty of Biology, Medicine and Health 4th floor, Jean McFarlane Building The University of Manchester Oxford Road Manchester M13 9PL research.bmh.manchester.ac.uk/

healtheconomics

@HealthEcon_MCR

Centre Lead

Prof Katherine Payne katherine.payne@manchester.ac.uk

Administrator

Matthew Ward matthew.ward@manchester.ac.uk



DIGITAL CARE HOMES PROJECT

A digital tool for falls prevention in care homes (The COVID-19 tracker) had been adapted for roll-out at scale across Greater Manchester (GM) pre-COVID-19. This tool has been developed to collect data from residents on COVID-19 symptoms as well as other key indicators including delirium. The COVID-19 Tracker summarises care home residents' status in a dashboard that provides critical information to the local health and care sector.

The NIHR Applied Research Collaboration Greater Manchester are evaluating the deployment and impacts of the tracker. Dr Akbar Ullah and Dr William Whittaker from MCHE are leading the quantitative evaluation which is assessing uptake and engagement with the COVID-19 Tracker and estimates the impact of the Tracker on COVID-19 spread and hospital admissions, and how COVID-19 might spread differently in different types of homes.

Daily data on residents with COVID-19 symptoms, care staff, available & occupied

beds, and PPE stock for 563 care homes have been extracted over April 2020 to April 2021 period.

To control for care home characteristics and COVID-19 rates in care home's surroundings, these data are linked to Care Quality Commission (CQC) registry data, local COVID-19 cases, and local deprivation scores.

The analyses are addressing many challenges presented by the very nature of the pandemic and the variation in the COVID-19 Tracker deployment timings. To address the possible heterogenous effects of the COVID-19 Tracker and the bounded nature of the outcome measures, the analyses employed is that of an event design difference-in-difference method estimated with probability-based regression models. Given the unknown functional relation between COVID-19 spread and intervention measures, the analyses are also complemented with the latest available nonparametric estimation methods. The results are likely to be available in autumn 2021.





HOMELESSNESS LINKED TO EMERGENCY **HOSPITAL ADMISSIONS**

People who are homeless use hospital services, especially emergency admissions, at much higher rates than people with homes according to new research published by Dr Thomas Allen from MCHE with colleagues from the wider university in BMJ Open.

We used Hospital Episode Statistics for 16,161 hospital patients registered as having no fixed abode and 74,780 housed patients. These two groups were matched on sex, single year of age, primary diagnosis and the emergency department the patient attended. From four years of hospital data we calculated that for patients experiencing homelessness emergency admissions were 2.08 times higher, and admissions 1.79 times higher than housed patients.

We also investigated differences in ambulatory care-sensitive admissions (ACSCs), reduce future hospital admissions. admissions for certain conditions, such as diabetes, asthma, and pneumonia, that could potentially be avoided with timely and effective primary care. We found that these admissions were 1.65 times higher in people who are homeless than people with homes.

Compared to 1,000 housed people with similar characteristics, 1,000 people who are homeless would collectively have 225 more emergency admissions per year, and 25 more ambulatory care-sensitive emergency admissions per year. The ambulatory caresensitive conditions that were more common in people experiencing homelessness were cellulitis (skin infections), convulsions/epilepsy, and chronic angina.

Addressing structural factors such as improved access to primary care could potentially reduce some of these admissions. However, the fact that only 11% of the additional emergency admissions experienced by the homeless cohort were for ambulatory care-sensitive conditions suggests that other approaches are needed if the goal is to reduce homeless persons' admissions to hospital. Our results may suggest that interventions which strengthen support for homeless A&E attendees have the potential to

For more info, please see:

C Moss, M Sutton, S Cheraghi-Sohi, C Sanders, T Allen. Comparative 4-year risk and type of hospital admission among homeless and housed emergency department attendees: longitudinal study of hospital records in England 2013–2018. BMJ Open. 2021.

METHODS FOR THE ECONOMIC EVALUATION OF DIAGNOSTICS (MEED) 2021 "THE ROLE OF HEALTH ECONOMICS IN A GLOBAL PANDEMIC – LESSONS LEARNT FROM COVID-19"

We are delighted to announce the return of the Methods for the Economic Evaluation of Diagnostics (MEED) Research Forum. Since 2018, the MEED Research Forum has brought together health economists who share an interest in developing methods to assess the value of diagnostic tests. As we start to emerge from this stage of the pandemic, this year's MEED Research Forum will turn its attention to the contribution of health economics when demonstrating the value of testing strategies for COVID-19.

The MEED Research Forum 2021 will take place online on 24 September 2021. Dr Sean Gavan, member of the organising committee, says, "our previous editions in Leeds (2018) and Manchester (2019) took place in a faceto-face environment. Now we can bring people together virtually to explore methods that health economists can use to support resource allocation decisions for COVID-19 testing strategies. We have an excellent set of speakers lined-up and invite everyone who is interested to save the date and join us on the day". The agenda will begin with a series of short talks and end with a panel discussion to reflect on the lessons learnt so far and the future directions for health economic analyses.

Dr Alexander Thompson, member of the organising committee, says, "The MEED event this September will be 18months after the first UK lockdown. We think it's a useful time to take stock of existing research and reflect upon how health economics might best contribute going forward."

The MEED Research Forum 2021 is free to attend but registration will be essential. Registration will open in September.

The organising committee for the MEED Research Forum 2021 includes Dr Sean Gavan and Dr Alexander Thompson from the Manchester Centre for Health Economics, alongside Dr Alison Smith (University of Leeds), Dr Diarmuid Coughlan (Newcastle University), and Dr Joy Allen (NIHR Newcastle In Vitro Diagnostics Co-operative).

For more information, please visit: https://newcastle.mic.nihr.ac.uk/methodsfor-the-economic-evaluation-ofdiagnostics-research-forum-2021/

As we start to emerge from this stage of the pandemic, this year's MEED Research Forum will turn its attention to the contribution of health economics when demonstrating the value of testing strategies for COVID-19.



RECENT MCHE PRESENTATIONS AND ACTIVITIES

Camacho E, Stock S, Whyte S, Weir C, Norman J, Heazell A. Cost-effectiveness of raising awareness of fetal movements to reduce fetal mortality (AFFIRM). June 2021. Royal College of Obstetrics and Gynaecology (RCOG) Virtual World Congress 2021.

Professor Katherine Payne chaired a session on 'Economic incentives' as part of a three-day workshop on Therapeutics organised by the Joint Programming Initiative on Antimicrobial Resistance (April 2021).

Gabriel Rogers was recently appointed to the NICE Technology Appraisal Committee.

Dr Leonie Penner won the prize for the "best oral presentation" at the Prescribing and Research in Medicines Management (PRIMM) 32nd Annual Scientific Meeting.

RECENT AND UPCOMING MCHE SEMINARS

Dr Junaid Arshad Associate Lecturer University of St Andrews 19 July 2021

Professor Mandy Ryan Director of the Health Economics Research Unit University of Aberdeen 27 September 2021

IN OTHER NEWS...

Congratulations to Stuart Wright who welcomed a baby girl, Lina Wright, on 8 August • Congratulations to Leonie Penner for successfully defending her PhD thesis • Congratulations to Alex Thompson for being appointed to the role of Senior Research Fellow • Congratulations to Anna Donten for starting as Research Associate • Welcome to Aleix Rowlandson and Luke Paterson who will be joining us as Research Associates beginning September.

STUDENT SPOTLIGHT: LEONIE PENNER



After three years as a PhD student, we are happy to announce that Leonie will continue working for MCHE as a Research Associate. Leonie will be part of the economics team around PROTECT [Avoiding patient harm through the application of prescribing safety indicators in English general practices]. PROTECT is a 4.5 years project grant that evaluates two different approaches to protect patients who are at an increased risk of harm from hazardous prescribing. The economics team, led by Professor Rachel Elliott, is involved in quantifying the economic impact of a set of hazardous prescribing events and to evaluate the overall cost-effectiveness of two interventions aiming to reduce these hazardous prescribing events. Some of the work Leonie conducted as part of her PhD already fed into the PROTECT project, and she will take on more responsibilities going forward.

A second project Leonie will be involved in is a pump priming project to characterise the impact of COVID-19related physical distancing and lockdown regulations on access to, and consumption of, prescribed medicines [Responding to the Impact of COVID-19 on MediCines AdHerence in Long TErm CondiTions (RICOCHET)]. Leonie will be involved in designing and conducting a survey to estimate what affects the extent to which people are taking medicines as prescribed and to identify which types of people are being impacted most.



RECENT MCHE PUBLICATIONS

Gordon J, Norman M, Hurst M, Mason T, Dickerson C, Sandler B et al. Using machine learning to predict anticoagulation control in atrial fibrillation: A UK Clinical Practice Research Datalink study. Informatics in Medicine Unlocked, 100688. 2021

Vass CM, Barton A, Payne K. Towards Personalising the Use of Biologics in Rheumatoid Arthritis: A Discrete Choice Experiment. The Patient. 2021.

Jones C, Payne K, Thompson A, Verstappen SMM. Predicting presenteeism using measures of health status. Quality of Life Research. 2021.

Wilmot EG, Evans M, Barnard-Kelly K, Burns M, Cranston I, Elliott RA, et al. Flash glucose monitoring with the FreeStyle Libre 2 compared with selfmonitoring of blood glucose in suboptimally controlled type 1 diabetes: the FLASH-UK randomised controlled trial protocol. BMJ Open 2021; 11(7):e050713

Hinde S, Bojke L, Richardson G, Birks Y, Whittaker W, Wilberforce M, Clegg A. Delayed transfers of care for older people: a wider perspective. Age and Ageing. 2021; 50(4): 1073-1076. C Moss, M Sutton, S Cheraghi-Sohi, C Sanders, T Allen. Comparative 4-year risk and type of hospital admission among homeless and housed emergency department attendees: longitudinal study of hospital records in England 2013–2018. BMJ Open. 2021.

Krishna MT, Vedanthan PK, Vedanthan R, El Shabrawy RM, Madhan R, Nguyen HL, et al. Is spurious penicillin allergy a major public health concern only in high-income countries? BMJ Global Health. 2021;6(5):e005437

Birch S, Ahern S, Brocklehurst P, Chikte U, Gallagher J, Listl S et al. Planning the oral health workforce: Time for innovation. Community Dentistry and Oral Epidemiology. 2021; 49(1): 17-22

Hill H, Birch S, Tickle M, Petty I, Goldthorpe J. An eReferral Management & Triage System for minor Oral surgery referrals from primary care dentists: a cost-effectiveness evaluation. BMC Health Services Research. 2021.