MANCHESTER CENTRE FOR HEALTH ECONOMICS

NEWSLETTER

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WELCOME! FROM THE CENTRE LEAD

WELCOME!

Welcome to the Winter edition of our MCHE Newsletter!

The University of Manchester is now re-opening its doors (again) after having to re-consider who was allowed to come on campus. In MCHE we are now starting to consider returning to the office and actually meeting some new members of staff that we have never seen in person even though they have been working with us for over a year.

In this Newsletter we describe some new programmes of work and the dissemination of completed work including a podcast that we encourage you to listen to. You will see that members of MCHE have been very active with publishing work and also presenting work (virtually).

At Christmas we were not able to have a face-to-face get together and held a Zoom-based Christmas party.

Our Christmas Elf (Prof Rachel Elliott) lead the writing of the MCHE version of The 12-days of Christmas and also ran three exciting competitions to keep us entertained.

We continue to run our MCHE external seminars over Zoom and are likely to do so for the near future. We welcome a new member of staff (Dr Luana Lenzi) and say goodbye to Peslie Ng'Ambi and Leonie Penner who have been valued members of MCHE.

Very best wishes from all of us in MCHE and we hope that you are enjoying the promise of spring and lighter evenings.

Katherine

DELIVERING ONLINE MUSIC PROGRAMMES FOR PEOPLE WITH DEMENTIA

Over the next two years, Dr Alex Thompson (Senior Research Fellow) is going to be supporting a project led by Music in Mind Remote (MIMR), a new company recently co-founded by The University of Manchester and Manchester Camerata.

Music-based activity has been delivered by Manchester Camerata to people living with dementia for over 12 years. Camerata's unique approach uses improvisation to help people living with dementia express themselves and communicate with others. These sessions help reduce frustration, enable new connections to be made, and have a profound effect on daily life. But delivering face-to-face activities with musicians in care homes can only ever reach a very limited number of the 850,000 who have dementia in the UK.

MIMR has specifically been founded to scale the joint work to help improve health outcomes and quality of life for people living with dementia in care home settings. MIMR intends to build a platform that can deliver music for dementia programmes online.

The solution will incorporate online training for care professionals and online delivery of programmes. Dr Alex Thompson will integrate health economic tools to evaluate the technology and said: "There is huge potential to improve the wellbeing of residents living with dementia by using a scalable therapy based upon music. The costs associated with avoidable agitation are substantial (£15,000 per 3 months) and so even small reductions in agitation could lead to large savings for our under strain social care system. It's a really exciting and inspiring project to be a part of."

You can learn more about the Manchester Camerata here: *https://manchestercamerata.co.uk/community/*

LOCUM DOCTOR USE IN ENGLISH GENERAL PRACTICE: ANALYSIS OF ROUTINELY COLLECTED WORKFORCE DATA 2017–2020

New research led by Dr Christos Grigoroglou (Research Fellow) and Dr Thomas Allen (Research Fellow) from MCHE, with colleagues from the wider university, was recently published in the British Journal of General Practice and showed that locum use in primary care has remained stable over time though their use seems to vary substantially across different practice types and areas of the country.

The study used practitioner-level information on FTE working hours from NHS Digital for all GP Types in England between 31/12/2017 to 30/09/2020. The data were linked to general practice-level information on population age, sex, quality of care, morbidity burden, patient satisfaction, rurality, deprivation, single-handed practices and healthcare regulators' rating for each general practice in England.

Over time, aggregate reported locum use in England varied from 3.15% in December 2017 to 3.08% in December 2018, 3.58% in December 2019 and 3.31% in September 2020. Median (IQR) locum age was 42 (36-51) years and the majority (63.8%) were UK qualified, were male (54.5%) and had long-term employment (74.0%). Rurality (incidence rate ratio (IRR) 1.250 [95% CI = 1.095 to 1.428]), inadequate Care Quality Commission ratings (IRR 2.108 [95% CI = 1.370 to 3.246]), and single-handed practice (IRR 4.611 [95% CI = 4.101 to 5.184]) were strong predictors of higher locum use. There was substantial variation in locum use between regions indicating differences in workforce planning, recruitment, and retention.

For more info see:
Grigoroglou C, Walshe K, Kontopantelis E, Ferguson J, Stringer G, Ashcroft DM, Allen T. Locum doctor use in English general practice: analysis of routinely collected workforce data 2017-2020. Br J Gen Pract. 2022 Jan 27;72(715):e108-e117.

You can also listen to a podcast episode about this paper here:
https://podcasts.apple.com/gb/podcast/locum-use-in-england-has-remained-stable-in-recent-years/id1533975582?i=1000547528214

ID-LIVER: SAVING LIVES BY DETECTING LIVER DISEASE EARLIER?

Integrated Diagnostics for Early Diagnosis of Liver Disease (ID-LIVER) is a new consortium, led by Neil Hanley, Professor of Medicine at The University of Manchester with Varinder Athwal, Consultant Heptologist at the Manchester University NHS Foundation Trust. As part of the 'Enabling integrated diagnostics for early detection' competition, the UK Government's Innovate UK Industrial Strategy Challenge Fund awarded £2.5 million to help patients with liver disease receive earlier, more accurate, and potentially life-saving, diagnosis. This is a research and innovation project, in partnership with colleagues from The University of Nottingham and Nottingham University Hospitals NHS Trust that is also receiving matched funding from major industry partners GE Healthcare and Roche Diagnostics, making the total investment nearly £4.5 million. The consortium is completed by Jiva.ai, Perspectum Diagnostics, Health Innovation Manchester, Trustech Smart Healthcare Ventures, Sectra, NorthWest EHealth, Octopus Ventures, and The Sollis Partnership. The project is also supported by the Academic Health Science Networks (AHSNs) in Greater Manchester (through Health Innovation Manchester) and the East Midlands, who will drive the clinical innovation and provide a route to NHS adoption of the new diagnostic approaches.

Liver disease is a silent killer as patients will often have no symptoms in early stages. In the UK almost four in ten people suffer health problems due to their livers not functioning correctly. A proportion of these patients develop liver scarring that can often progress to complete liver failure that is one of the UK's largest health challenges, for which there is currently no solution apart from transplantation.

At present, there are a number of single diagnostic tests that can identify liver disease, but only when the disease is well established. None of these tests identify patients with early signs of liver disease or pinpoint patients who are destined for much worse outcomes. The ID-LIVER consortium primarily aims to address this challenge by developing new software that integrates patient and diagnostic data from a number of different tests. By doing so, the consortium aims to identify patients with early-stage liver disease and those at risk of progressive life-threatening liver disease, including liver cancer.

Professor Katherine Payne, Anna Donten (Research Associate) and Gabriel Rogers (Senior Research Fellow) are leading the economic component of ID-LIVER that involves two projects. One project will use decision-analytic model-based cost-effectiveness analysis to identify the health care costs and health consequences of using a 'one stop' Liver Assessment Clinic to diagnose liver disease. This project will conceptualise and build a discrete event simulation to understand the potential impact of 'time to event' (a diagnosis of presence or absence of liver disease) and the health care resources required for 'one stop shop' compared with current approaches. It will also explore the impact of potential 'bottlenecks' (or capacity constraints) on the time to a diagnosis. The second project will use early economic analysis to understand the key drivers of the cost-effectiveness of a risk-prediction clinical tool to identify patients at risk of developing advanced liver disease. This project will build on published work led by Rachel Elliott, Professor of Health Economics, (see Tanajewski L et al. BMJ Open 2017; 7:e015659) to understand the key uncertainties in the available evidence base and the impact of where in the pathway the risk-prediction clinical tool is placed.

For more information, please visit:
https://sites.manchester.ac.uk/id-liver/

https://www.manchester.ac.uk/discover/news/multimillion-pound-scheme-could-make-early-diagnosis-of-liver-disease-a-reality/

THE 12 DAYS OF CHRISTMAS

MCHE got festive by wearing their best Christmas attire and singing their very own version of the 12 days of Christmas. Our virtual Christmas do also involved competitions: guess the weight of the Tarleton cabbage, most gross food/drink on screen and guess who is who from childhood photos.

On the twelfth day of Christmas, my true love gave to me....

Twelve Drummonds professing
Eleven seas a-rising
Ten STATA errors
Nine deadlines passing
Eight lorries queuing
Seven parties cancelled
Six politicians lying
Five Feigl-Dings
Four tunnel states
Three spiked proteins
Two touted drugs,
...........and an outlier in CPRD

RECENT MCHE PRESENTATIONS AND ACTIVITIES

Gavan S. Delivering Advanced Therapies at Scale. Invited seminar at Newcastle University. 7 December 2021.

Wright SJ. Accounting for capacity constraints in economic evaluations of precision medicine. Invited seminar at University of Aberdeen. 15 December 2021.

Prof Katherine Payne gave an invited talk and contributed to panel discussion on 'Health systems and implementation of precision medicine: the need for economic evidence' at the ICPerMed Family Meeting – Joining Forces online event held on 9th November 2021.

Prof Katherine Payne contributed to 'against' argument with Prof Andrew Biankin (University of Glasgow) vs the 'in favour' team of Prof Emma McIntosh (University of Glasgow) and Prof Karen Brown (University of Leicester) for the Oxford-style debate chaired by Prof Linda Bauld (University of Edinburgh) on 'This House believes that the economic and survival impact of cancer prevention is superior to that of cancer treatment' at the National Cancer Research Institute Festival online event held on 10th November 2021.

MCHE SEMINARS

Dr Anna Heath
Biostatistician
University of Toronto/SickKids Hospital
24 January 2022

Dr James O'Mahony
Assistant Research Professor
Trinity College Dublin
28 February 2022

Dr Paul Schneider
Wellcome Trust PhD student
University of Sheffield
28 March 2022

IN OTHER NEWS...

Congratulations to Dr Martin Eden whose paper about developing new frameworks to value genomic information was named as Personalized Medicine's most read editorial of 2021 • Welcome to Dr Luana Lenzi who joined us as a Research Fellow in January • Farewell to Peslie Ng'Ambi and Leonie Penner who left MCHE in December.

HIP ARTHROPLASTY WITH HYBRID OR CEMENTED IMPLANTS: PATIENT REPORTED OUTCOMES

Dr Martin Eden (Research Fellow) and Garima Dalal (Research Associate) are analysing data from the HipHOP Study. Funded by NIHR Research for Patient Benefit, the feasibility randomised controlled trial compares different approaches to arthroplasty (also known as total hip replacement). Arthroplasty involves replacing the ball and socket joint in the patient's hipbone and, currently, there is a lack of good quality evidence on optimal approaches and their relative cost-effectiveness.

Prompted by calls for well-designed pragmatic RCTs, the HipHOP study was developed by a multidisciplinary team including clinicians, statisticians, health psychologists and health economists. The study is being led by Professor Tim Board from Wrightington, Wigan and Leigh NHS Teaching Hospitals Trust with collaborators from the universities of Liverpool, Manchester, Bristol and Oxford.

The aim of the study is to demonstrate the feasibility of conducting a definitive RCT with economic evaluation. Quantitative and qualitative data analysis are being used to this end. Colleagues from the Manchester Centre for Health Psychology have interviewed patients and health professionals to understand perceptions and experiences of the trial to guide development of the ensuing study.

For the economic analysis, Martin and Garima from MCHE will be analysing cost data and looking at how the EQ-5D might be used in the definitive trial. A preliminary cost-effectiveness analysis will be undertaken to provide indicative estimates of the relative cost-effectiveness of approaches to arthroplasty. Results from the HipHOP feasibility study are expected in spring 2022.

RECENT MCHE PUBLICATIONS

Eden M, Hainsworth R, Gordon L, Epton T, Lorigan P, Marais R , Green AC, Payne K. Cost-effectiveness of a policy-based intervention to reduce melanoma and other skin cancers associated with indoor tanning. British Journal of Dermatology 2022 (in press)

Hill H, Birch S, Tickle M, Pretty 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; 21:781

Mason T, Whittaker W, Dumville J, Bower P. Variation in appropriate diabetes care and treatment targets in urban and rural areas in England: an observational study of the 'rule of halves'. BMJ Open. 2022

Dave R, Bromley HL, Taxiarchi V, Camacho E, Barnes N, Hutchison G, Bishop P, Hamilton W, Kirwan C, Gandhi A. No Association Between Breast Pain and Breast Cancer. A Prospective Cohort Study of 10,830 Symptomatic Women Presenting to a Breast Cancer Diagnostic Clinic. British Journal of General Practice 2021 (in press)

Shields G, Pennington B, Bullement A, Wright SJ, Elvidge J. Out of Date or Best Before? A Commentary on the Relevance of Economic Evaluations over Time. PharmacoEconomics 2021 (in press)

Shields GE, Wilberforce M, Clarkson P, Farragher T, Verma A, Davies LM. Factors Limiting Subgroup Analysis in Cost-Effectiveness Analysis and a Call for Transparency. Pharmacoeconomics. 2021:1–8.

Sandin K, Shields GE, Gjengedal RGH, Osnes K, Bjørndal MT, Hjemdal O. Self-Reported Health in Patients on or at Risk of Sick Leave Due to Depression and Anxiety: Validity of the EQ-5D. Front Psychol. 2021 Oct 28;12:655151.

Allen T, Gyrd-Hansen D, Kristensen S, Oxholm A, Pedersen L, Pezzino M. Physicians under pressure: Evidence from antibiotics prescribing in England. Medical Decision Making 2021
https://www.pulsetoday.co.uk/news/clinical-areas/prescribing/overworked-gps-more-likely-to-prescribe-broad-spectrum-antibiotics-finds-study/

Oxholm A, Allen T, Gyrd-Hansen D, Jarbøl D, Sydenham R, Pedersen L. Work pressure and job dissatisfaction: Challenges in Danish general practice. Nordic Journal of Health Economics 2021 (in press)

Grigoroglou C, Walshe K, Kontopantelis E, Ferguson J, Stringer G, Ashcroft D, Allen T. Locum doctor use in English general practice: analysis of routinely collected workforce data 2017–2020. Br J Gen Pract 2021 (in press)
https://www.pulsetoday.co.uk/news/workforce/gp-locum-usage-stable-over-past-few-years-finds-study/

Price G, Devaney S, French DP, Holley R, Holm S, Kontopantelis E, McWilliam A, Payne K, Proudlove N, Sanders C, Willans R, van Staa T, Hamrang L, Turner B, Parsons S, Faivre-Finn C. Can Real-world Data and Rapid Learning Drive Improvements in Lung Cancer Survival? The RAPID-RT Study. Clinical Oncology 2022 (in press)

Jankovic D, Soares M, Payne K, Bojke L. Eliciting uncertainty for complex parameters in decision-analytic model-based cost-effectiveness analyses: quantifying a temporal change in the treatment effect. International Journal of Technology Assessment in Healthcare 2022 (in press)