WOLFSON INSTITUTE OF POPULATION HEALTH NEWSLETTER
ISSUE 50: 14 FEBRUARY 2024

In this issue of our Wolfson Institute of Population Health Newsletter, we celebrate the achievements and work of staff and students at the end of January and into the first weeks of February.

FROM OUR NEW DEPUTY INSTITUTE MANAGER, MEGAN LIDDLE

Dear All

With Ellie and Fiona both travelling at the moment, this seems as good a time as any to take this opportunity to introduce myself as the new Deputy Institute Manager, and particularly to say thank you for the warm welcome I have received from colleagues so far. I'm excited be here, and am looking forward to meeting many more of you over the coming weeks, and to exploring and our Whitechapel and Charterhouse Square campuses, which are new to me after being based at Mile End for the last 13 years.

Prior to taking up this role I was based in the School of Maths over in Science and Engineering, where I spent around nine years supporting the Head of School, School Manager and the wider Senior Management Team, and managing HR and School Operations. Before that I was based in central HR for four years. So while I've been at Queen Mary a while, I am new to the world of Medicine and Dentistry. Please bear with me while I settle in - I will have a lot to learn in the coming months!

Finally, a quick reminder that the call for nominations for FMD 2024 Staff Awards for excellence in Research, Teaching, Citizenship and Collegiality, and for teams or individuals close tomorrow (Thursday 15 February). Please submit nominations via the online form. Nominations are also currently open until 1 March for QMUL Research and Innovation Awards

Kind regards

Megan

MEET WIPH

MEET John Ford (Senior Clinical Lecturer in Health Equity, CPC)

How would you describe your roles and responsibilities?

I lead a team undertaking research on health inequalities, and what works to address them. The two big projects we have are EQUAL-QI which is my NIHR advanced fellowship looking at equity-focused quality improvement in hospitals, and the Health Equity Evidence Centre (HEEC) which uses machine learning to map the evidence base of what works to address inequalities.

What has been your greatest professional achievement?

I've been successful in getting two NIHR fellowships first time (doctoral fellowship and advanced fellowship), and my doctoral fellowship led to two impact prizes because of the way the findings were picked up by the NHS.

What aspects of your role do you enjoy the most?

I do research because I believe it can make a positive difference in the world. So, the part of my role I enjoy the most is using evidence to positively influence society, policy-makers and practitioners.

What would be your second choice as a profession?

Before studying medicine, I was offered a place to leave school a year early and study plant science at university. So somewhere in the metaverse there may be another version of me who is a plant scientist.

What do you enjoy doing outside work?

I have three very active boys. They drive me up the wall at times, but my most enjoyable times are when we are doing something fun together outdoors, e.g. mountain biking, kicking a rugby ball about or throwing a frisbee.

Something about you that most people don't know?

I've got an overactive bladder which means that I use the gents more than most, especially after a couple of cups of tea and coffee. It's not a big deal, but I dread a 3-hour non-stop meeting!

FROM OUR LEADERSHIP TEAMS

Equality, Diversity and Inclusion News (Evangelos Katsampouris – EDI Lead)

Save The Dates: The WIPH EDI Group is organising an online showcase to celebrate International Women's Day on Wednesday 6 March from 12-1pm (more information to follow soon). The Group is also planning to organise a few events to celebrate Neurodiversity Celebration Week between 18 and 24 March (more information to follow soon).

As always, we encourage all WIPH colleagues, students and staff, to continue using the Online Suggestion Form, available through the EDI section on the Staff Zone, to recommend improvements or to report issues.

RESEARCH NEWS (Tor Kemp, Research Manager)

The Research Team delivered the second WIPH Whiteboard chaired by Belinda Nedjai, with Andrew Harmer receiving valued input into how to study health effects of climate change on indigenous populations in the Indian Sundarbans. There were many ideas and linkages for Andrew to mull over. Thanks to everyone who attended! Laura Smith from the Centre for Preventive Neurology will be presenting at the next session on Thursday 29 Feb @CHSQ 10-11am.

We had two presenters, at another very successful Health Inequalities Grant Clinic, who received excellent input for bids looking to (i) address maternity care inequalities in local Tower Hamlets communities (Elena Greco), and (ii) identify factors affecting uptake and engagement with a DCBI for lung cancer prehabilitation: 'Living With Lung Cancer' App (Rebekah Young). Thank you to our advisors Meg Clinch and Rohini Mathur! The next session will be on Thursday 14 March, online 10-11am.

The Research Team welcomed colleagues to the second drop-in and were able to offer our combined knowledge to work through research-related issues. Please do join for the next drop-in on Thursday 15 Feb, online 10-11am. Bring any thoughts, suggestions, or issues - you're very welcome!

GENERAL INSTITUTE NEWS

Primary care sexual and reproductive health consultations among migrant women
17 January (Rohini Mathur. Centre for Primary Care)

Addressing a lack of evidence on the sexual and reproductive health and rights of migrant women, researchers conducted a study of primary care consultations

among 1.2 million women, 7.9% of whom were migrants. Results showed that consultation rates were lower in migrants than non-migrants, as were consultation rates for emergency contraception and cervical screening. Higher rates were found in migrant women for abortion and management of fertility problems. No significant differences were seen for chlamydia testing or domestic violence. The proportion of non-migrants ever prescribed long acting reversible contraceptives was almost double that among migrants. Researchers identify opportunities for tailored interventions in access to primary care, long acting reversible contraception and cervical screening, to actualise sexual and reproductive health as a human right.
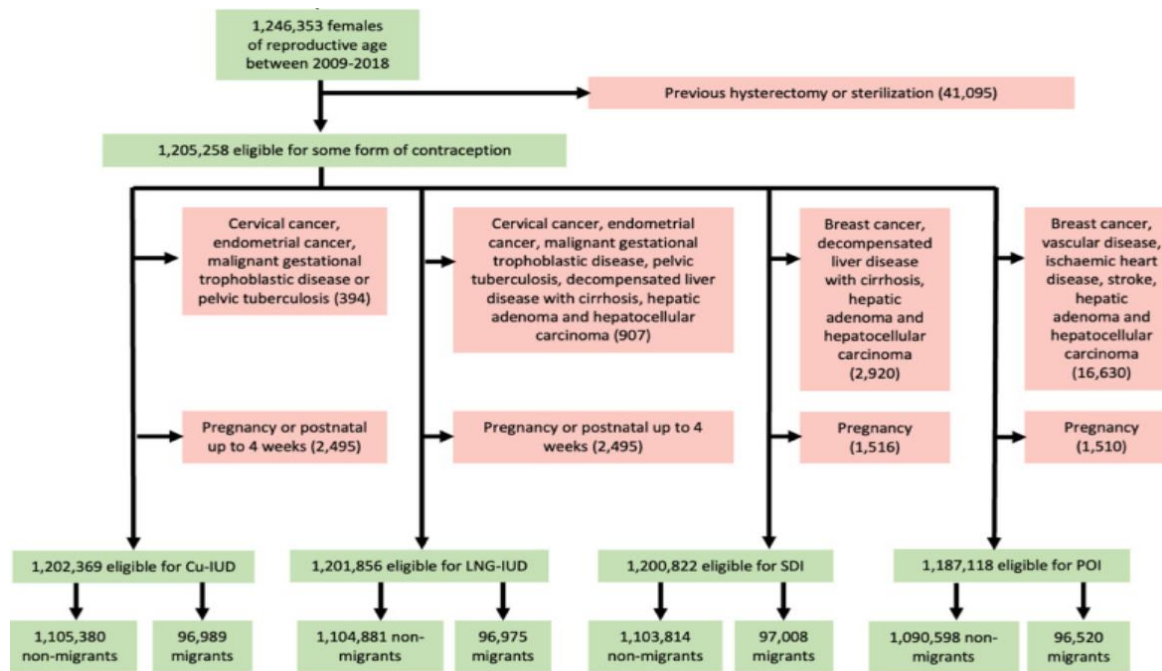
Vestibular cognitive dysfunction: challenges and priorities for the future
18 January (Laura Smith. Centre for Preventive Neurology)

A narrative review to address gaps in understanding vestibular cognitive dysfunction and how best to identify and manage this in clinical practice provides recommendations for healthcare professionals. Vestibular disorders, conditions of the inner ear and brain affecting balance, coordination, and the integration of multisensory inputs have been linked to cognitive problems such as attention, visuospatial perception, spatial memory, and executive function. Researchers highlight the importance of multidisciplinary collaboration for developing and evaluating clinically relevant theoretical models of vestibular cognition, to advance research and treatment.
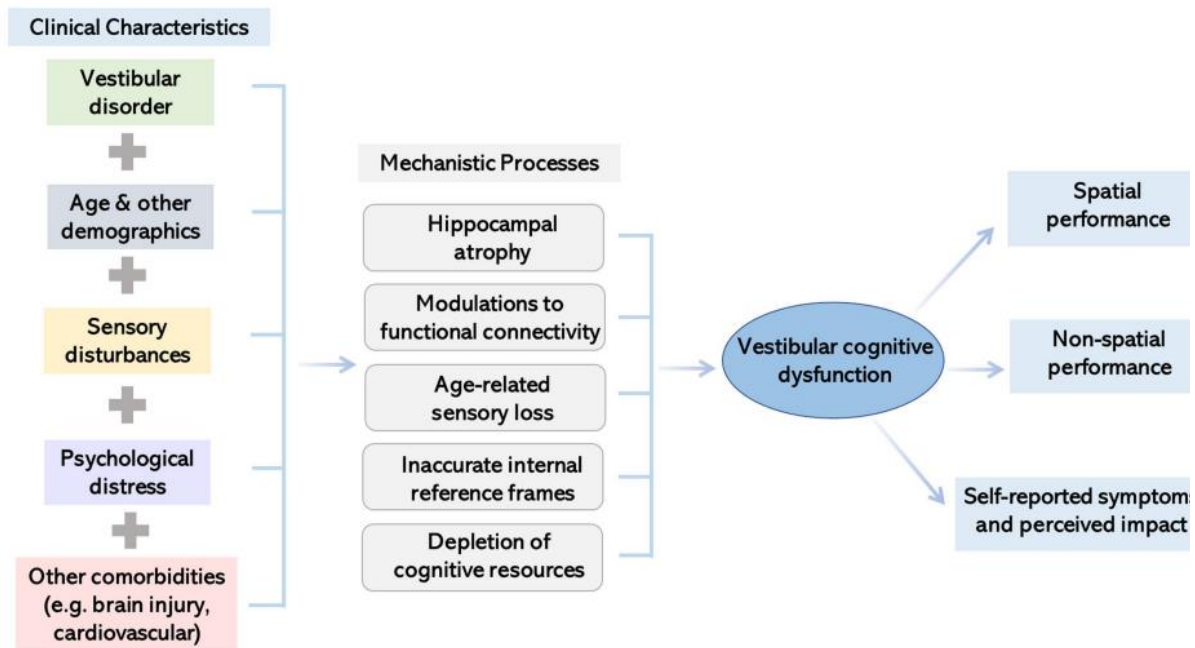
Consensus Group calls for increased access to cervical screening
25 January (Matejka Rebolj. Centre for Cancer Screening, Prevention and Early Diagnosis)

Matejka Rebolj addressed a panel discussion at an EU policy event organised by the ACCESS international consensus group on cervical cancer at the EU Parliament in Brussels. The event, *Turning the tide: increasing participation in cervical cancer screening to save women's lives*, followed publication of the ACCESS white paper on increasing screening among under-screened women. Matejka told the panel that HPV self-sampling offers convenience and privacy, but that the accuracy of self-sampling tests is not as high as hoped, and some women do not follow up after a positive self-test result. She concluded that self-sampling is better than no screening, but is not a like-for-like replacement for clinician sampling.

CRUK City of London Centre Annual Symposium - Future Leaders
30 January (Oleg Blyuss. Centre for Cancer Screening, Prevention and Early Diagnosis)

Oleg Blyuss was invited as a Principal Investigator in the field of early detection and prevention to deliver a talk to the CRUK City of London Centre Annual Symposium for Future Leaders at the Francis Crick Institute on 30 January. Oleg spoke on the early detection of cancer using multiple longitudinal biomarkers.

## Launch event for national BRCA gene testing programme
31 January (Ranjit Manchanda. Centre for Cancer Screening, Prevention and Early Diagnosis)

Professor Ranjit Manchanda was a key speaker and honoured guest at the House of Lords Launch event for the national BRCA screening programme for early cancer prevention on 31 January. He was introduced by Professor Peter Johnson, National Clinical Director for Cancer at NHSE England, who recognised Ranjit's work over 15 years leading the Genetic Cancer Prediction through Population Screening Study. Ranjit said that the NHS BRCA screening rollout is an exciting step forward and will prevent many more cancers and save many lives. He told the audience that Britain was only the second country in the world (after Israel) to introduce such a programme. He concluded with a smile: '*Ours is better*'.

Weight trends in adults with diabetes or hypertension during the pandemic
31 January (Caroline Morton, Daniel Stow, Rohini Mathur, Sarah Finer. Centre for Primary Care)
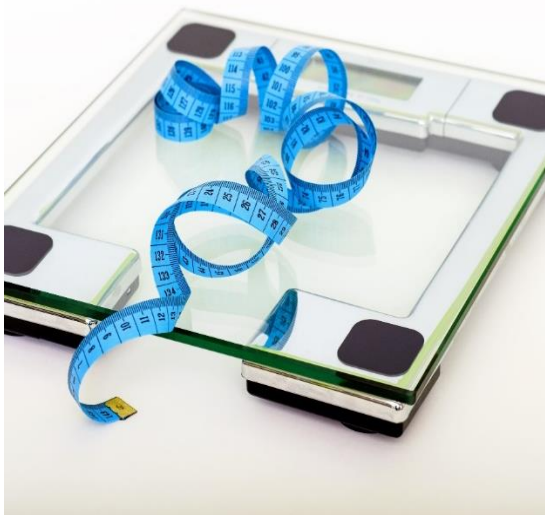
Using routinely collected health data for over 1.2 million adults in England with type 2 diabetes or hypertension, researchers examine clinical and sociodemographic characteristics associated with weight change among these groups during the COVID-19 pandemic. Results show that, overall, people with T2D lost weight overall, while those with hypertension maintained stable weight, but rapid weight gain was evident in both groups (20.7% and 24.7% respectively), and was more common among females, younger adults, those living in more deprived areas, and those with mental health conditions.

National NHS BRCA gene testing to identify cancer risk early for people with Jewish ancestry

1 February (Ranjit Manchanda, Centre for Cancer Screening, Prevention and Early Diagnosis)

NHS England have announced a new screening programme to provide genetic testing for people with Jewish ancestry, who are more likely to carry BRCA gene faults that can increase risk of breast, ovarian, prostate and pancreatic cancers. The introduction of the new programme is testimony to the extensive body of published research evidence from Ranjit Manchanda. The national NHS Jewish BRCA Testing Programme will offer adults with Jewish ancestry a home-based saliva test to detect BRCA1 or BRCA2 faults. The national roll-out will see around 30,000 people tested over the next 2yrs, and will enable people with BRCA faults to seek early access to surveillance and prevention services. Compared with the general population, people with Jewish ancestry are around 6 times more likely to carry BRCA gene faults.

'Rare positive trial result' for new support intervention for people with dementia

1 February 2024 (Claudia Cooper, Sara Banks, Jessica Budgett. Centre for Psychiatry and Mental Health)

NIDUS-Family, a new therapy to help people with dementia and their carers attain personal goals, has potential to be rolled out to support consistent, evidence-based dementia care across the NHS. Participants in an RCT of 302 pairs of family carers and people with dementia were supported to set their own goals (eg. enabling the person with dementia to carry out more activities, experience better mood, sleep, appetite, relationships or social engagement, or to improve carer support and wellbeing). Over 1yr, participants who received the intervention (whether remotely or in person) were significantly more likely to achieve their goals than those receiving usual care, and only 9.3% of those in the intervention arm (v 13.3% among controls) had moved to a care home or died. The intervention was delivered by non-clinical facilitators, who were provided with supervision and training. Researchers are now following up participants to determine whether the new support helps people with dementia stay in their own homes longer.

Obituary for a diagnosis

1 February (Stephen Hibbs, Deborah Swinglehurst. Centre for Primary Care)

A tongue-in-cheek paper entitled 'Obituary for a diagnosis: B-cell prolymphocytic leukaemia (1974–2022)' presents a reminder of social constructs in medical practice, and the sometimes limited lifespans of some diagnostic labels. Focusing on the case of B-cell prolymphocytic leukaemia, the authors note that diagnostic labels are not scientific truths, but reflections of the understanding of a group of people at a particular timepoint, and 'often have shorter lifespans than their human inventors'.
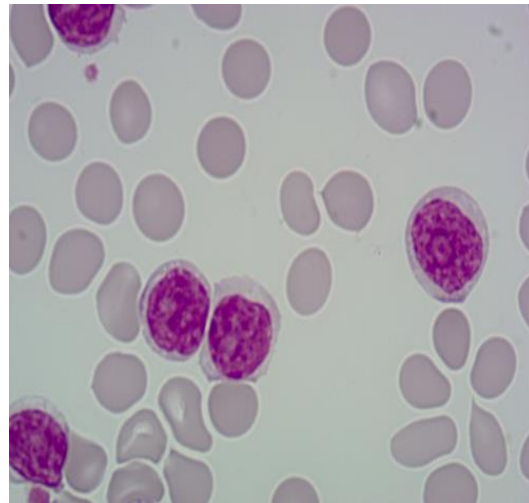
CT radiation doses in the Yorkshire Lung Screening Trial
2 February (Rhian Gabe. Centre for Evaluation and Methods)
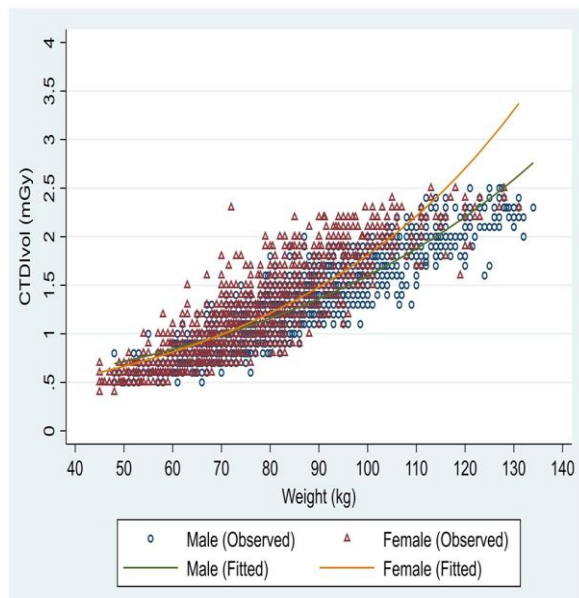
A study of low dose CT radiation scans performed in the first year of the Yorkshire Lung Screening Trial evaluates radiation dose metrics as a function of participant weight to establish that the additional lifetime attributable cancer risks arising from a single trial scan were in the range 0.001%-0.006%. Researchers conclude that low radiation doses can be achieved across a typical lung screening cohort using scan protocols shown to deliver high image quality, and note that these observed dose levels may be considered typical values for lung screening scans on similar types of scanners for an equivalent participant cohort.

Behavioural messaging in recruiting to health research through social media
5 February (Jing Hui Law. Centre for Primary Care)

A comparison of behavioural messages in social media to recruit study participants randomised 1060 subjects to 3 advertisement types (standard, patient endorsement, or social norms), to investigate their intention to participate, understanding of the study message and aims, and willingness to be redirected to the study website. Subjects in the patient endorsement and social norms advertisement groups showed

significantly lower intention to take part in the study compared with the standard advertisement group. The patient endorsement advertisement was considered more difficult to understand, and the social norms advertisement decreased willingness to visit the study website compared with the standard advertisement. Researchers conclude that adding normative behavioural messages to tweets made the message harder to understand and decreased subjects' intention to take part in the study, suggesting that simple messaging is more suitable for social media recruitment.

Cost-Effectiveness of Gene-Specific Prevention Strategies for Ovarian and Breast Cancer

5 February (Xia Wei, Li Sun, Samuel Oxley, Ashwin Kalra, Michail Sideris, Adam Brentnall, Stephen Duffy, Rosa Legood, Ranjit Manchanda. Centres for Cancer Screening, Prevention and Early Diagnosis/Evaluation and Methods)

An economic evaluation of prevention strategies for ovarian and breast cancer in carriers of pathogenic variants of BRCA1, BRCA2, PALB2, RAD51C, RAD51D, and BRIP1 cancer susceptibility genes assesses cost effectiveness of risk reducing salpingo-oophorectomy (RRSO) and risk reducing mastectomy (RRM) compared with non-surgical interventions. In a simulated cohort of women, the study found that RRSO, with or without RRM at varying optimal ages was cost effective compared with nonsurgical strategies for those carrying pathogenic variants of these genes. The findings support personalizing risk-reducing surgery and guideline recommendations for individual cancer susceptibility gene-specific ovarian and breast cancer risk management.
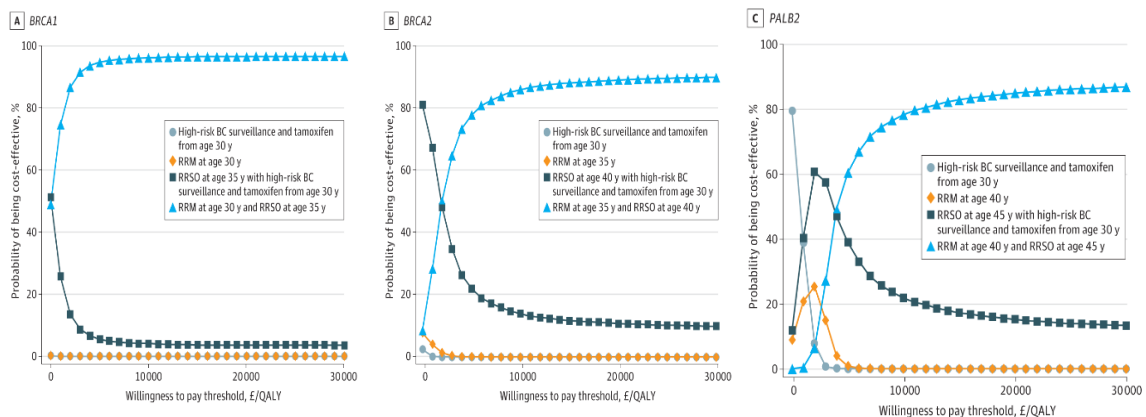
Risk of fractures in half a million survivors of 20 cancers

6 February (Garth Funston. Centre for Cancer Screening, Prevention and Early Diagnosis)

Researchers investigating risk of bone and major osteoporotic fractures in 578,160 survivors of 20 of the most common cancers have compared incidence rates with those among matched cancer-free individuals. Results showed that survivors of most types of cancer were at increased risk of bone fracture for several years after cancer. Effect sizes tended to reduce over time since diagnosis, but remained elevated for more than 5 years in several cancers (multiple myeloma and stomach, lung, breast, prostate, and central nervous system cancers.
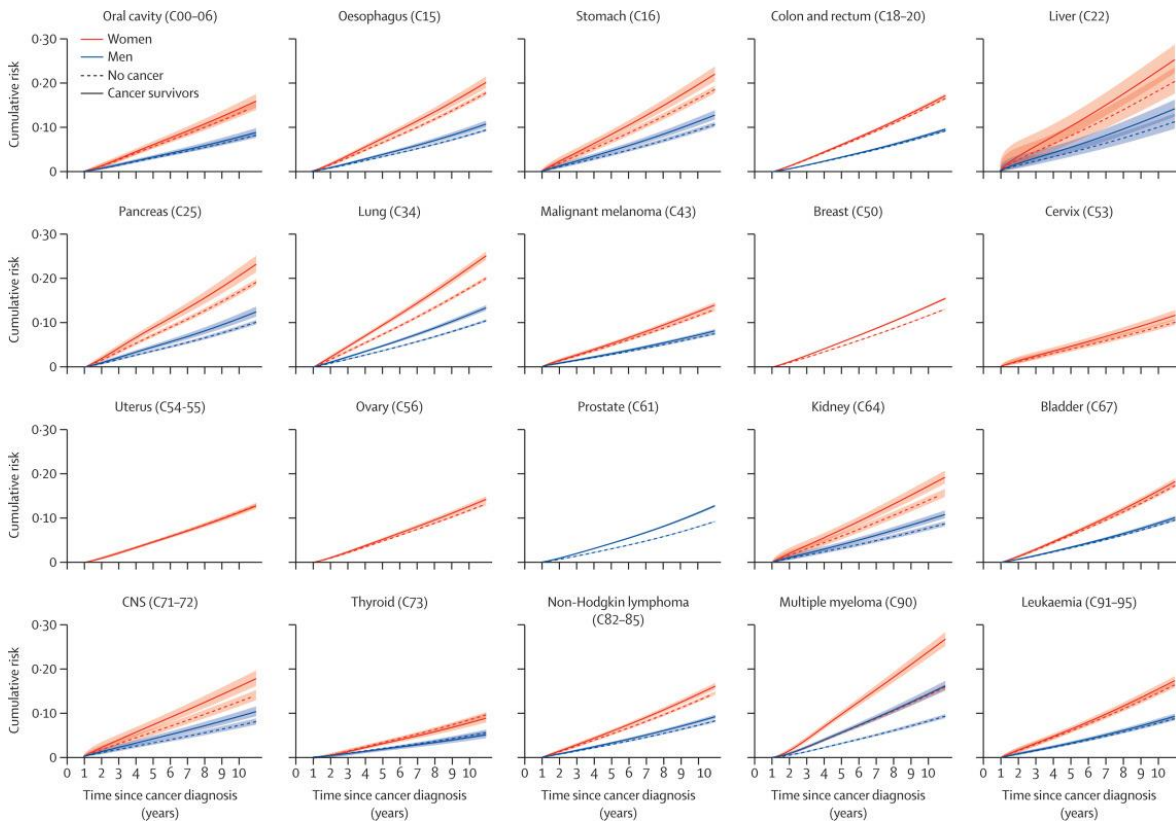
Experiences of people living with lung cancer in rural areas
6 February (Daisy McInnerney, Sammy Quaife. Centre for Cancer Screening, Prevention and Early Diagnosis)

A systematic review of qualitative literature on the experiences of people living with lung cancer in rural areas in high income countries (Australia and New Zealand) identifies five themes in the challenges faced by these patients: diagnosis/ treatment pathways, travel/ financial burden, communication/ information, interaction with healthcare professionals, and symptoms and health-seeking behaviours. Authors hope their results will enable future researchers to develop tailored support to address the existing disparities affecting this population.

UK Parliament Committee told vaping has 'substantial potential' to solve the problem of the harms caused by smoking
6 February (Peter Hajek. Centre for Public Health and Policy)

Providing expert advice to an evidence session for the UK Parliament Health and Social Care Committee Inquiry into prevention of harms and ill health caused by smoking, Peter Hajek told the Committee that to prevent harm caused by smoking, '*Alternative products have substantial potential to solve the problem for us*'. He said that UK smoking prevalence is declining, particularly in younger people, and that there is no evidence that vaping is a gateway into smoking, but some evidence that it is a gateway out. He noted that in the UK and USA the decline in smoking is faster than in Australia, where vaping is banned. Pointing out that vaping is much less addictive than smoking, he highlighted the '*horrific misinformation*' about health risks from vaping, which prevents many people from switching, and said that communicating the enormous difference in risk between smoking and vaping to encourage people to use something safer than smoking was a priority.

parliamentlive.tv

New Parkinson's UK Senior Research Fellowship
6 February (Eduardo De Pablo Fernandez, Alastair Noyce. Centre for Preventive Neurology)

A grant of almost £300k from Parkinson's UK has been awarded to Eduardo de Pablo Fernandez, who will join WIPH from UCL in September 2024 to conduct a study investigating pure autonomic failure in the development of Parkinson's disease. Being able to predict which people with PAF will go on to develop Parkinson's would allow earlier diagnosis, years before deterioration of motor function, and may provide a window of opportunity to test treatments that may slow down progression to Parkinson's. Eduardo will be supervised by Professor Alastair Noyce.

Are better AI algorithms for breast cancer detection also better at predicting risk?
7 February (Ruggiero Santeramo, Adam Brentnall. Centre for Evaluation and Methods)

A case control study, using mammograms taken at breast cancer diagnosis and at the 3yr previous screening visit when no cancer was detected, evaluates whether algorithms that work well for cancer detection also work well for risk assessment, and whether performance of algorithms for detection and risk assessment is correlated. Using a deep-learning model designed for breast cancer risk assessment (Mirai), and 3 open-source deep-learning algorithms designed for breast cancer detection, researchers found that overall performance using the paired mammograms followed the same order by algorithm for risk assessment (area under the curve - AUC range 0.59–0.67) and detection (AUC 0.81–0.89), with Mirai performing best for both. Correlation was observed in performance for risk and detection within algorithms by cancer size, with much greater accuracy for large cancers (30 mm+, detection AUC: 0.88–0.92; risk AUC: 0.64–0.74) than smaller ones. Authors conclude that risk assessment improvements could stem from enhancing cancer detection capabilities for smaller cancers.
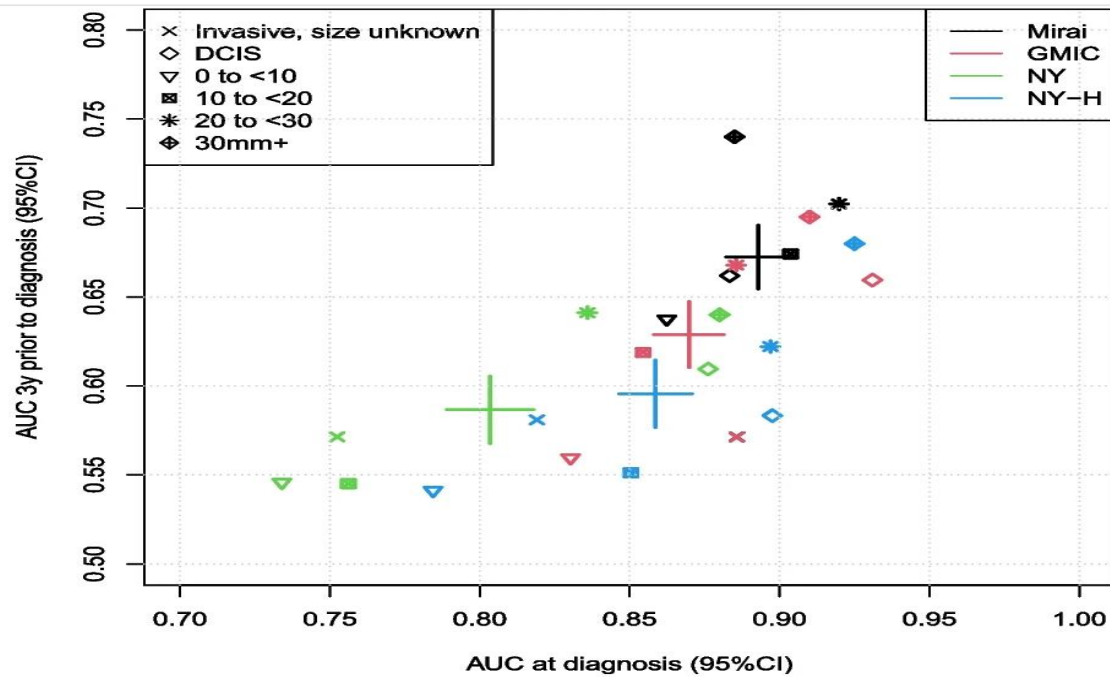
Amlodipine dosing for hypertension via smartphone app during the pandemic
7 February (Rhian Gabe. Centre for Evaluation and Methods)

In a pilot study of remote management of amlodipine dosing to control blood pressure (BP), 205 patients with primary hypertension self-monitored BP and received personalised amlodipine dose titration advice using a smartphone app and telemonitoring. Novel (1,2,3,4,6,7,8,9 mg) and standard (5 or 10mg) daily doses were administered over 14 weeks, resulting in a mean BP fall from 142/87 to 131/81mm Hg. Most participants achieved BP control on novel doses (84%). Of these patients, 35% were controlled by 1mg daily. The majority (88%) controlled on novel doses had no peripheral oedema. No withdrawals occurred from adverse events. Personalized dose titration with amlodipine was safe, well tolerated, and efficacious in treating primary hypertension, and authors conclude that App-assisted remote clinician dose titration may better balance BP control and adverse effects and help optimize long-term care.
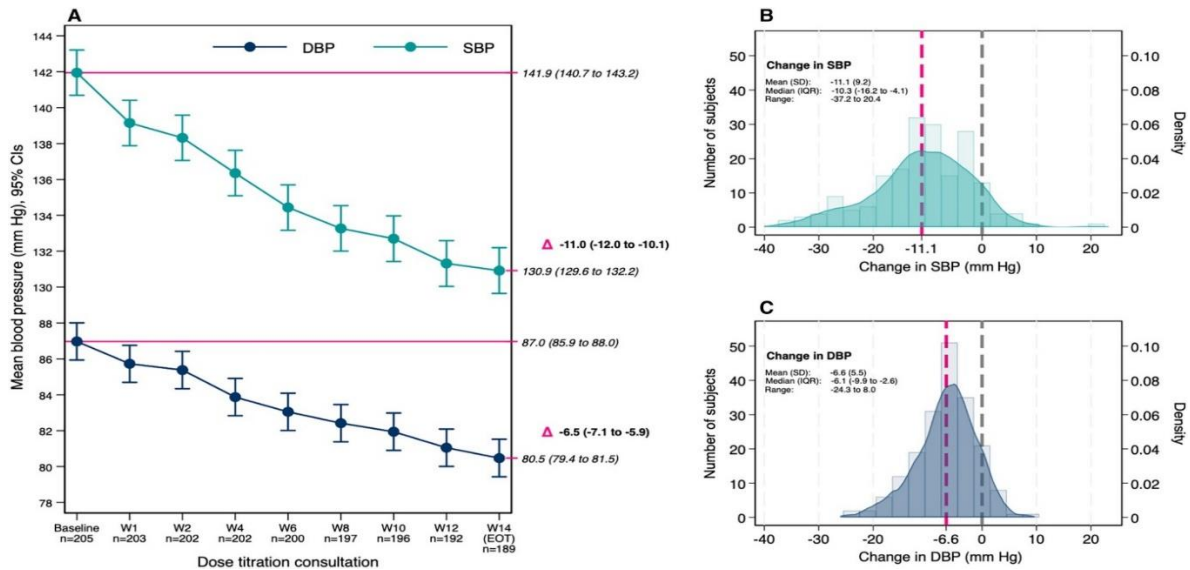
Psychological therapy for depression and anxiety for people with dementia
8 February (Claudia Cooper. Centre for Psychiatry and Mental Health)

Using national linked healthcare records for 1522 people living with dementia in England, a study investigating outcomes associated with psychological therapy finds that dementia type is generally not associated with depression and anxiety outcomes, and that clinical factors were consistent with those for the general population. People with frontotemporal dementia were more likely to experience reliable deterioration in depression/ anxiety symptoms than those with vascular dementia or Alzheimer's disease. Lower work and social functioning, psychotropic medication use, being of working age and fewer therapy sessions were associated with worse therapy outcomes.

Fetal loss and long-term maternal morbidity and mortality
9 February (Jahnavi Daru, Matina Iliodromiti. Centre for Public Health and Policy)

A literature review of 56 studies, including data for over a million women who had experienced pregnancy loss, researchers have found that women with a history of stillbirth have a greater risk of future cardiovascular disease, type 2 diabetes, and renal morbidities, but women experiencing (single or multiple) miscarriages do not seem to have an altered risk. Women with a history of stillbirth had lower risk of breast cancer, but there was no evidence of altered risk of other malignancies in women experiencing pregnancy loss compared with controls. There was also no evidence of long-term mental illness risk in women with previous pregnancy losses.

Improving type 2 diabetes diagnosis and monitoring in ethnic minority groups
12 February (Sarah Finer. Centre for Primary Care)

Work has begun on a Wellcome Tust funded 8yr project to study health inequalities in the diagnosis of type 2 diabetes among Black African, Caribbean, and some South Asian people, for whom the standard HbA1c diabetes blood test works less well than in other populations. The WIPH team has received £3 million to set up 2 new large studies, one in a cohort of Black African and Caribbean patients with type 2 diabetes, and the other an in-depth study using continuous glucose monitors in existing research participants without diabetes. In conjunction with an Exeter University team, the project aims to understand individual blood sugar levels more accurately. Researchers hope the findings will make the diagnosis and monitoring of type 2 diabetes more precise, ensuring that the people who need it get the best possible care and treatment.
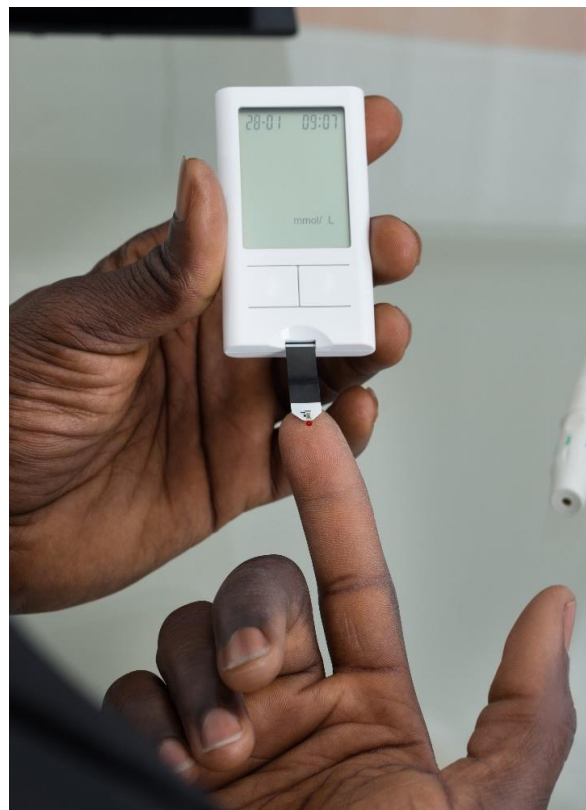
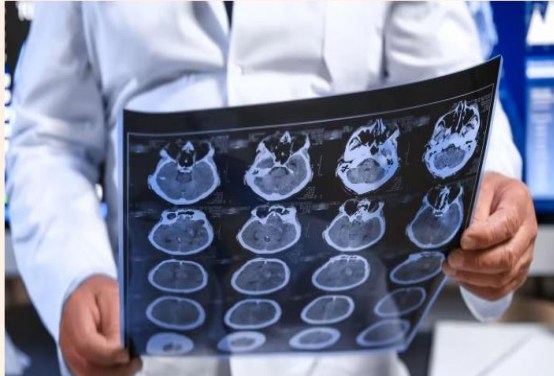## Expert comment: Blood test offers 'reliable' Alzheimer's warning 15 yrs early
12 February (Charles Marshall. Centre for Preventive Neurology)

FINANCIAL TIMES

Dementia (+ Add to myFT)

Blood protein test offers 'reliable' Alzheimer's warning 15 years early

Large study further boosts fast-evolving efforts to predict and prevent neurogenerative diseases

A new study from Fundan and Warwick universities shows that blood proteins can predict dementia up to 15 years before clinical diagnosis. From blood samples of >52,000 people in the UK Biobank genetic database, researchers analysed proteins in participants who developed dementia, using machine learning to identify 11 that they say are accurate predictors of future dementia. In expert commentary for the Financial Times, Charlie Marshall said that the next steps should be to 'show how these protein markers perform in other cohorts that are less healthy and wealthy than UK Biobank' participants. He added that another important follow-up would be to explore if predictive accuracy could be further improved by combining the study's protein marker analysis with other techniques such as blood tests and brain scans.

PREDICT-PD trial exceeds goal to enrol 10,000 participants
14 February (Alastair Noyce and team. Centre for Preventive Neurology)

PREDICT-PD, a groundbreaking research project to identify people at higher risk of Parkinson's disease before symptoms appear, has surpassed its goal to recruit 10,000 unaffected participants. Since March 2020 the WIPH project team has worked with health and technology company UMED to improve enrolment and diversity, resulting in a 275% increase in monthly enrolments (an additional 7000 participants). People from minority backgrounds are vastly underrepresented in Parkinson's research, but by targeting eligible participants from ethnic minorities with images of ethnically diverse patients in study communications, the project has achieved a significant increase in the proportion of participants from minority backgrounds, improving diversity from 3% to 10% of the study cohort**.**
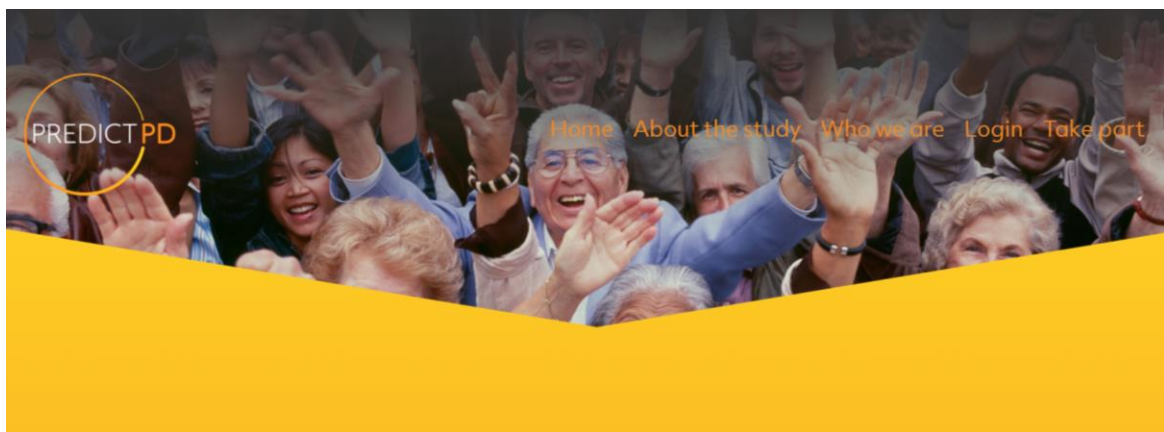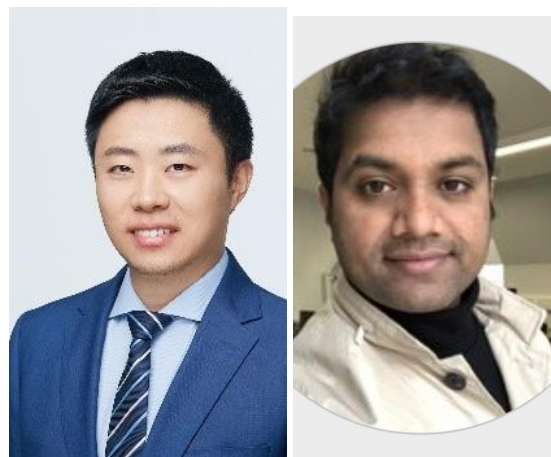
Inaugural Lecture: Professor Richard Hooper
21 February (16:30-19:30)

Professor of Medical Statistics and Deputy Lead in the WIPH Centre for Evaluation and Methods, Richard Hooper will present his QMUL inaugural lecture at the Derek Willoughby lecture theatre, Charterhouse Square, on 21 February. The title of his lecture will be "A pattern emerges". Book here.

London Health Economics Group meeting
29 February (17:00-19:00)

The Health Economics & Policy Research Unit (HEPRU) will host the next London Health Economics Group meeting on 29 February, 5-7pm at the WIPH Charterhouse Square site, room 129. The meeting will feature two talks: Runguo Wu (CEM) will speak on the *Use of individual participant data in model development for assessment of cost effectiveness and health inequalities*, and Dr Nilesh Raut (LSE) will address *Transmission of Caregiving Across Generations*. Informal drinks will follow the presentations. Click here to book.

Inaugural Lecture: Professor Dennis Ougrin
6 March (5:15pm)

Dennis Ougrin, Professor of Child and Adolescent Psychiatry and Global Mental Health, will deliver his inaugural lecture 'Self-harm and suicide in young people' on Wednesday 6 March at 5:15pm in the Perrin Lecture Theatre (Whitechapel). Suicide is a leading cause of death in young people, and self-harm is the strongest known predictor of suicide. Both self-harm and suicide are increasing in most countries. Professor Ougrin will focus on key findings of his career, from the origin of self-harm in hunter-gatherers to the cutting-edge models of intensive community care for young people with severe self-harm. Book here.

Many thanks to all who so enthusiastically contribute. Please send any news items for the next newsletter to j.a.mackie@qmul.ac.uk