

Research, Scholarship and Knowledge Exchange

for Lifelong Health and Wellbeing



About the Institute for Health Research

The Institute for Health Research (IHR) at Liverpool John Moores University (LJMU) provides a focal point to stimulate and facilitate the expansion of health research and scholarship among colleagues from across the institution. The IHR also coordinates our partnerships with external stakeholders, collaborators and organisations that are engaged in and/or fund health research.

LJMU has a broad range of expertise in health research and education. A key strength of LJMU is the multi-disciplinary

approach we take towards 'real-world' health issues and this is particularly evident in the innovative approaches that are being applied in our research.

Health and health-related research within LJMU takes place within all four Faculties and at a local level is focused within various research institutes, research centres and schools. Research work covers a range of health topics, from the maintenance of a healthy body and mind (wellbeing, sport and physical activity, nutrition and children's health), the prevention of illness

(interventions, predictions and public health) through to the understanding, management and treatment of disease and illness (pharmacy, nursing, pharmacology, biomedical science, therapeutics and health technology).

Crossing all of these activities are developments relating to improving care pathways and workforce development and the ambition to develop, expand and deepen our external collaborations and partnerships.



Our expertise

Researchers within LJMU have wide-ranging expertise in health research methodologies extending across qualitative and quantitative methods, data analysis, computational modelling and intervention development. We work as part of multidisciplinary groups alongside the public, clinical populations and clinicians. Our lab-based research portfolio extends from the molecular to cellular, through tissues and organs to whole body physiology, function, biomechanics and psychology.

Collaborative work

The IHR is built upon a cross-university research culture that encourages and facilitates collaboration between both academics within LJMU and colleagues working in the health services, commercial sectors and industry. Working directly with professionals enables a rapid response to significant events, such as the introduction of new health policy and guidance, the emergence of strategic health priorities and new product development.

The breadth of health research at LJMU is reflected in the number and type of external stakeholders and organisations the different research groups are currently successfully working with. We have a close working relationship with a number of organisations including: Mersey Care, Alder Hey Children's Hospital, Royal Liverpool and Broadgreen University Hospitals, Pain Relief Research Institute and the Centre for Collaborative Innovation in Dementia.

We also currently undertake commissioned research and public health surveillance for Local Authorities in Cheshire and Merseyside, including work commissioned by CHAMPS public health network. Globally we work on United Nations projects and are a World Health Organisation (WHO) Collaborating Centre for Violence Prevention. We can evidence strong links with local stakeholders, varied funding sources, world-leading academic outputs, public engagement events, STEM investment and media outreach which facilitate translation and enable us to contribute to and shape local and international strategies for health promotion.

Understanding and Changing Behaviour

A distinctive thread in our multidisciplinary approach to health research is the focus on understanding and changing behaviour



Healthy behaviours and a healthy workforce

LJMU is involved in developing, conducting and evaluating interventions that are aimed at increasing wellbeing and changing behaviours in patients, health and social care professionals and in the general public. For example, changing and improving healthy behaviours in young people in relation to obesity, diabetes, physical fitness, drugs and alcohol and the effective use of medicines and treatment regimes.

Our world-leading expertise extends across intervention development, implementation and evaluation. We are actively engaged in exploring ways in which we can improve the lives of people in the Liverpool city region and are passionate about supporting young people to play an active part in society. Our ability to work across professional boundaries and our expertise in both child and public health makes us the ideal collaborator in this area. Our work is across the human life course and occurs across a wide spectrum of the community, including schools, families, workplaces, natural spaces and clinical settings.

We have expertise in cognitive neuroscience and in applying psychology to health (such as mindfulness and pain perception) and in developing and delivering behaviour change interventions with both patient groups and healthy populations. We are expanding work in technology and health including the development of apps, evaluating the use of technology in clinical practice and the use of technology to prompt behaviour change in real time.



The Public Health Institute (PHI) has an international reputation in several research areas including substance use, sexual and reproductive health and is a WHO Collaborating Centre for violence prevention. The PHI has made significant contributions to policy, legislation, commissioning, practice and education. The institute is interested in the wider impacts of substance use, including its relationship with inequalities, violence and wellbeing.

In addition to traditional evaluative work, the PHI has undertaken large nationally representative general population surveys, prevalence estimates and systematic reviews, in order to better understand and target interventions. Research data and outputs enable the development of methodologies that demonstrate the social impact and value of interventions and we have an excellent track record of research with some of the most vulnerable members of society. For more information, go to: www.ljmu.ac.uk/phi



The Physical Activity Exchange (PAEx) works in partnership with local government, public health, industry and the third sector to deliver applied solutions to increase physical activity, reduce sedentary behaviour and impact on local/global health policy and practice. Working with commissioners, practitioners and service users, the PAEx has co-developed successful physical activity interventions that are feasible, effective and sustainable in practice and provide high-quality services for independent evaluation of existing programmes. The impact of this research was recognised in REF2014 with two case studies being graded as world-leading. More information is available at: www.ljmu.ac.uk/paex



Educating and developing the workforce

LJMU is heavily committed to the educational development of health professionals and enhancing their abilities to provide care and support and to develop and deliver services. We provide high-quality, research-informed education and practical skill development. We conduct research to identify the most effective ways to improve the engagement and behaviour of patients with health and social care services and the practical development of health and social care professionals, to enhance their ability to meet emerging health care needs to meet the future needs of the health sector. More information is at: www.ljmu.ac.uk/study/cpd

Preventative and predictive modelling

We have the expertise to utilise, map and correlate complex real-world data on public health alongside other published health profiling to understand how different aspects of behaviour and social factors can be used to visualise health profiles and predict which individuals are at more risk of developing particular conditions in the future. This valuable information can then be used in the design of interventions to change behaviour and attitudes at an early stage to improve health consequences and to reduce the requirement for extensive and costly treatment. These can be linked together and offer an opportunity for the design of interventions to be undertaken – for example the creation of a risk prediction model for alcohol and chronic conditions.

Our research has designed a mathematical tool to map the associations between standard public

health measurements to determine health profiles and this has been utilised by Salford Local Authority with NICE showing an interest in taking the tool to a national level. The aspiration of this research is to create the technology to draw on many indicators to create a national forecasting intervention tool.

The unique public health intelligence and surveillance systems provided by LJMU have provided detailed demographic and behavioural data to the services and commissioners of Liverpool City Region for the last 17 years, forming the basis for a number of national developments. Furthermore, the intelligence generated has enabled the development of methodological techniques to estimate the size and nature of hidden, often vulnerable populations. This work is now being applied in many countries around the world.



Understanding how alcohol harms society

This research has supported the development of national guidelines and local campaigns on alcohol. Work on alcohol attributable fractions estimated the proportion of a disease or injury that could be prevented if exposure to alcohol was eliminated and how this differed on the basis of age, sex, and socioeconomic status. This programme of work has also estimated the burden of alcohol harm borne by those not drinking, providing important evidence for assessments of the impact of alcohol use on society. PHl recently provided evidential support for the 2016 CMO alcohol guidelines by systematically mapping and reviewing evidence on health harms to support the guideline committee's decision making.

Integrated care

We have experience of engaging with a range of users and carers who are facing the challenges of living with long-term conditions. Our diverse group of health and social care professionals use their clinical experience to engage with patients experiencing a range of different conditions, including cardiovascular disease, dementia, mental health and cancer.

Our ability to engage with people and understand their needs allow us to identify novel ways of improving their life experiences. Nationally, we are working with Heart Care Partnership UK and we have contributed to the development of national guidelines via respected organisations such as the British Heart Foundation and the British Cardiovascular Society.

Health Psychologists focus on current population health priorities,

supporting long-term condition self-management (such as diabetes and chronic pain); health behaviour change (for example smoking cessation and healthy eating), workforce care (such as workplace stress and staff training) and more.

We specialise in mental health care and work with local schools to support teachers in identifying and supporting pupils with mental health care needs, with commercial organisations to improve the mental health of the workforce and supporting our colleagues in the NHS

to provide high-quality mental health care in later life. Our colleagues hail from different communities providing us with privileged access and insight into the needs of, for example, the refugee and Chinese community.



Our innovative approach to dementia care, using living labs, has enabled us to establish ourselves as a leading light in this field in Europe. The Innovate Dementia project, and now the HELIUM project, are aimed at supporting people to transition from hospital to staying at home longer. The emphasis is on developing innovations that both enable this to happen and enable the service user to be in control of their own health and wellbeing. The living lab is a structural framework which engenders this enabling process. We are currently working with partners from both the health and social care and commercial environments to enable us to improve the lives of people living with dementia across the city and wider world.



This is a tripartite collaboration between Royal Liverpool and Broadgreen University Hospitals NHS Trust, LJMU and Celesio UK. The focus is on clinical pharmacy practice research and the education and training of pharmacists and pharmacy technicians. The main research activity concentrates upon the transfer of care between hospital and community at the admission and discharge stages to enhance the role of community pharmacy to improve the quality of medicines management for patients. This will decrease waste and maximise clinical input and improve the quality of patient care by increasing compliance.

A key LJMU education stream aims to encourage and inspire inter-professional, inter-disciplinary and inter-sector integration to facilitate the aspiration of excellence in the delivery of health and social care. Paediatric medicines research focuses mainly on formulations of paediatric medicines with a longstanding collaboration with Alder Hey Children's Hospital.



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Gillian provides strategic leadership in relation to increasing the range and quality of health-related research activities across the university and with our external partners.

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