

LJMU IHR COVID-19 Research, Innovation and Knowledge Exchange Update March 2021

Throughout the COVID19 pandemic, researchers across all 5 Faculties in LJMU have focused and adapted their research towards addressing this emergency. Most projects involve working with external partners and agencies to tackling the ongoing emergency and now also looking towards recovery and the future, for example, addressing the physical and mental wellbeing of the frontline NHS workers. Researchers have undertaken rapid data gathering exercises that have informed the pandemic response at home and abroad and provided guidance and information about the impact of Covid-19 on wellbeing via media outlets. We have continued to work with Liverpool Health Partners (LHP) and the other NHS and HEI members on COVID-19 research and innovation engaging with the Liverpool STOP COVID alliance and the STOP COVID monthly webinars. We continue to work as a partner of the Applied Research Collaboration North West Coast (ARC NWC) to address the impact of COVID on health inequalities and COVID19 specific activity can be accessed from [Coronavirus - NIHR](#). This LJMU report highlights some of the successful projects undertaken during the past year (March 2020- March 2021) and includes updates on ongoing projects, bids, and ideas within Appendix 1. **For further information, to add content or for collaborative opportunities, please contact G.A.Hutcheon@ljmu.ac.uk**

1. Highlights

Healthcare volunteers: Staff across the Faculty of Health have devoted their time and expertise to help the NHS cope with the pandemic. Within the School of Nursing and Allied Health (NAH) students and staff were mobilised into clinical areas to “Save the NHS” and NAH was responsible for one of the highest rates of student-nurse deployment in the NHS (858). 40 students were provided with bespoke call-handling training, enabling them to assist the 999 and 111 telephone operators in meeting the needs of the emergency services. Demand for support in local domestic violence, drug and alcohol, safeguarding and mental health services also increased during the pandemic and some social work students continued to work in these services either on placement or as paid employees.

Rob MacDonald from Liverpool School of Art and Design is a volunteer for MerseyCare NHS Foundation Trust and during the pandemic was a *MerseyCare Telephone Buddy* making weekly telephone calls to patients living in isolation in the Inner City and having conversations about well-being, social matters, feelings, and state of mind.

Healthcare education: Academic staff also had to ensure that routine education continued to safeguard the longer-term supply of qualified staff into the Health and Social Care workforce. NAH worked with other regional Higher Education Institutions and NHS Directors to ensure a collective approach to the redeployment of students into clinical practice and the coordination of their ongoing learning. Where clinical placements were suspended, NAH adopted unique ways of providing students with a clinical experience whilst upholding the standards of excellence outlined by Professional, Statutory and Regulatory Bodies. Since March 2020, these initiatives have enabled over 500 H&SC professionals to graduate and are now being used in other Universities.

The Nursing team, in collaboration with RefuAid introduced a programme that enabled 14 qualified nurses seeking refuge in the UK to contribute to the pandemic response

Supporting the region's schools: Throughout the pandemic, LJMU's student teachers have remained on placement and have played a significant role in supporting the region's schools. Over 500 student teachers on both Postgraduate and Undergraduate Teacher Education Programmes have continued to attend school placements (often on a full-time basis). During "lockdown" 50 % of secondary Student Teachers and 90% of Primary student teachers remained in schools, teaching vulnerable children and the children of key workers. 95% of Secondary student teachers and 60% of primary student teachers also taught classes remotely, from their own homes. Now that schools are returning to full opening, LJMU trainee teachers are supporting the re-integration of all learners to schools and will resume their standard placements, with the intention of gaining Qualified Teacher Status by the end of June. The resilience of this cohort of student teachers, and their contribution to sustaining LJMU Partner schools' education plans, over a difficult period, have both been commended by Head Teachers across the North West.

Supporting Liverpool City Region's recovery from COVID-19: Understanding the differential impacts of the COVID-19 pandemic for health and wellbeing is essential for full social and economic recovery in the LCR. Staff from the Public Health Institute (PHI) at LJMU are working in collaboration with the Director of Public Health (DPH) for Liverpool, the University of Liverpool (UoL) and the voluntary and community sector to inform and support an evidence informed approach to the recovery planning work of the Merseyside Resilience Forum (MRF).

The impacts of the COVID-19 pandemic and the measures introduced to control the spread of the virus have varied depending on people's social and economic circumstances, exposing the deep and persistent inequalities in society. During the last decade Liverpool City Region (LCR) has become a good news story, but the impacts of COVID-19 have hit the region hard. More of our businesses are in vulnerable sectors of the economy and more of our region live in poverty, leaving them vulnerable to the worst impacts of COVID-19. The Health & Equity in Recovery Plans Working Group convened by Matthew Ashton, Liverpool Director of Public Health is a working group of the Merseyside Resilience Forum (MRF). The working group is co-chaired by Lisa Jones (PHI, LJMU) and Dr Andy Turner (Liverpool City Region Combined Authority) who are taking a research agenda forward to deliver the best available evidence and intelligence to support recovery planning by the MRF. The group membership has wider representation from the University of Liverpool, LJMU, local authority public health teams, and Speciality Registrars on the Health Education England training scheme. This work will directly influence and have a demonstrable impact on the extent to which the Liverpool and LCR recovery plans support health and wellbeing, and especially the health and wellbeing of our most vulnerable populations. The work will ensure that existing inequalities, especially in health and social care, are not exacerbated. This research will feed into local recovery plans through the MRF Multi Agency Intelligence Cell (MAIC), of which Lisa Jones is a member. The purpose of MAIC is to support the decision making and impact assessments of the MRF Recovery Coordinating Group and sub-groups.

Vaccine Supply Chains: Sarah Schiffing has shifted her research on humanitarian logistics and disaster relief supply chains to issues closer to home during the pandemic. Her expertise is in complex supply chains with multiple stakeholders and high sociopolitical impact. She has used this to analyse the COVID-19 vaccine supply chains with a particular focus on explaining them to a non-academic audience to enhance understanding and reduce anxiety over the delivery of these life-saving vaccines. A series of articles in The Conversation covering issues like vaccine waste, UK-EU disagreements over contracts, and global distribution resulted in extensive media coverage in the UK and abroad. Sarah is working on a project on vaccine distribution and is currently involved in a European research collaboration focusing on medicine shortages. As a trustee of the Humanitarian Logistics Association, she is particularly involved with the distribution of vaccines in developing countries.

Supporting the local population via Radio City Talk

In March 2020, the week before the start of the first national lockdown, Graeme Mitchell from PHI was asked to appear on the Steve Horthersall show on Radio City Talk, to discuss Covid 19. He was then invited back the following week and had a daily 10 minute slot in the morning to cover the Covid19 headlines from March until June, when the station closed. Since then he has been asked to appear on a regular basis on several local radio stations, including BBC Radio Manchester, BBC Radio Merseyside, BBC Radio Cumbria and Radio City with a combination of commentary slots plus hour long phone ins, to answered listeners' questions. Graeme was interviewed for the main BBC news bulletins on the day that mass testing was first introduced in Liverpool and also for the BBC website and Liverpool guide, to discuss Covid 19 issues.

IHR Crisis and Pandemic Interest Group

Founded in April 2020 by Mark Forshaw, this multidisciplinary group has grown in both size and reach; there are currently 27 members including 14 LJMU staff across, 5 trainee psychologists and 8 external members undertaking COVID-related research and activities, looking towards recovery and the potential to extend what has been learnt to other crisis and pandemics in the UK and internationally. If you are interested in joining this group, please contact M.J.Forshaw@ljmu.ac.uk

Key Activities (please see Appendix 2 for the full report)

- A study by Victoria Blinkhorn and Mark Forshaw on attitudes to the pandemic, tolerance of uncertainty, and personality aims to assess how and why individuals are behaving the way they are during the pandemic. Participants were asked via an online survey about their views, thoughts, and actions concerning COVID, along with other measures assessing tolerance of uncertainty, locus of control, and dark triad personality traits. Data collection is complete and currently being coded for analysis. Hopefully, this exploratory study will uncover how personality and individual differences relate to specific behaviours during the pandemic.
- Kathryn Bould and Mark Forshaw undertook a study on 'Readability of Online COVID-19 health information and advice' to assess the readability of publicly available online COVID-19 information. At a time when organisations were rapidly providing advice and reacting to a developing pandemic, it was hypothesised that haste may be associated with a lack of clarity, as measured by readability indices. The results demonstrate that, despite the recommendation that information be at a sixth grade reading level most of the websites presented content that was at a higher reading level based on the readability indices used. Therefore, a significant amount of information available on the Internet about Covid-19 will not be easily readable for many individuals attempting to use the Internet to help inform their decisions about their health and behaviour.
- Samantha Brooks progressed the findings of a recent poll by The Policy Institute, King's College, London (Duffy & Allington, 2020), using cluster analysis to identify three levels of conformity response to the COVID-19 lockdown. People across the globe were asked to take part in some tasks to help the researchers to determine some cognitive-emotional processes underlying the recently recognised psychological responses to the COVID-19 lockdown. This data will help to develop future interventions that may improve psychological health during and after lockdown.
- Exploring how residential services adapt in a pandemic context is of significance given that COVID-19 is yet to peak in the social care sector. Helena Gosling has been exploring how staff and service users, across residential alcohol and drug treatment services in the UK, have redefined and re-established core treatment priorities during the pandemic. The project is based within four residential services (including a specialist family service for women and their children) and the

findings will be disseminated as best practice guidelines to inform policy and practice across residential services throughout the UK to enhance the sectors ability to build a more sustainable treatment landscape moving forwards.

- Laura Boulton, Dominique Walker and Michelle McManus are currently collecting data for a British Academy funded project entitled 'Policing a pandemic: exploring the impact of the Coronavirus Act 2020 on public perceptions towards the police and examine their use of powers within Merseyside . A mixed methods approach will be taken via studies: (i) an online survey exploring public perceptions of The Coronavirus Act 2020 police use of powers, (ii) an online survey examining frontline police officer experiences of the implementation of these powers, and (iii) an analysis of the COVID related arrests/use of COVID related powers in Merseyside.

2. Research ongoing across LJMU

Public Health

The Public Health Institute undertook a series of rapid data gathering exercises that have informed the pandemic response at home and abroad. For example, exploring the impact of COVID-19 and government restrictions on people attending A&E departments and vulnerable adults using services such as needle and syringe programmes (NSP). Reports have been used by local authority resilience planning forums and Public Health England to ascertain the impact of restrictions on NSP coverage.

- **The PHOENIX Project**

Viv Hope is leading the PHOENIX project (A survey of **People and Households Ongoing Efforts in Response to the National COVID-19 Guidance and its Impacts Across(X)** the North West), a collaborative study involving colleagues from PHI and the School of Psychology. The study involves quantitative and qualitative research to examine how government restrictions about social distancing have been received, to understand the health and wellbeing-related impact on people and explore if and how these impacts differ across population groups, specifically people BAME and LGBTQ+ communities. The online survey has been completed by 1604 people (with analysis underway); and almost 45 people have taken part in qualitative interviews to date.

The research is supported by LJMU, with Research Assistant time funded by the LJMU COVID-19 research fund. The research will inform local recovery plans and the team have a range of academic outputs planned, including papers focusing on impacts on LGBQ and BAME communities, health behaviours, resilience and wellbeing, Protection Motivation Theory, and violence/adverse childhood experiences.

- **Violence against women and children**

- Zara Quigg has been leading a study in collaboration with the London School of Hygiene and Tropical Medicine to conduct a rapid assessment of the impacts of COVID-19 on violence against women and children across the European Region, and public health responses to assist WHO in supporting country prevention and response efforts. A cross LJMU team has been set up to support this study including support from LJMU communications teams
The study objectives are:

1. To understand how COVID-19 public health measures affect violence against women and children across the life course in WHO European Member States.

2. To understand how COVID-19 response activities affect prevention and response strategies for women and children affected by violence in WHO European Member States.

Information is being collected via a survey (completed at city/county level), interviews with key informants (non-government organisations, government officials, academics) and review of press and policy documents. Key findings have been submitted to the WHO and will be shared in due course via a range of outputs.

- With Marie Claire Van Hout, a WHO regional office for Europe project on the *COVID19 rapid assessment – strengthening public health response to violence against women and children is being undertaken (2019, £15K)*

- **Liverpool evaluation**

LJMU was asked by Eileen O’Meara, Director of Public Health for Halton and Clinical Lead for Population Health in Cheshire and Merseyside to provide a qualitative evaluation of the roll out of the SMART (Systematic, Meaningful, Asymptomatic, Repeated Testing) approach in the Liverpool City Region (LCR). This evaluation will be led by Lisa Jones (PHI) and will focus on gathering qualitative data about the public health impacts of the LCR SMART approach within the six LCR local authorities. The evaluation will have a focus on understanding the behaviours, innovations and systems that facilitate access to repeated, asymptomatic testing among (i) at-risk communities and vulnerable people, and (ii) key local businesses/workplaces.

The evaluation is scheduled to run alongside the roll out of the SMART approach in LCR: **January – March 2021**. The evaluation has two main parts:

- *Part 1* is aimed at understanding the coordinating pathways for SMART across the six local authority areas in LCR. This part of the evaluation will look at decision making at the local level and explore how the purpose of the SMART approach has been clarified and/or interpreted.
- *Part 2* is aimed at engaging with individuals and settings to explore behaviours related to the uptake and acceptance of repeated, asymptomatic testing. The evaluation team will work with the local authority teams to prioritise the inclusion of participants from key at-risk communities and vulnerable people, and key local businesses/workplaces.

Mental Wellbeing

Researchers within the School of Psychology have been investigating the effect of COVID19 and the lockdown on the mental wellbeing of children.

- **The ALICE study:** (Adolescents’ Lockdown-Induced Coping Experiences), investigating impact of COVID-19 on 11-14 year olds is being undertaken by Emma Ashworth, Pooja Saini, Jennifer Chopra, Shane McLoughlin, Catrin Eames, Dave Putwain and Anna Hunt. An evidence briefing has been published on the LJMU website and a ‘caring for your wellbeing’ document produced for young people. All schools who participated in the study were given a bespoke feedback report outlining the mental health and wellbeing of their pupils. Qualitative data has been analysed and the paper is available as a pre-print: <https://doi.org/10.31124/advance.14046032.v1>. Findings have been covered by BBC Radio Merseyside.

Pooja Saini is leading their follow on study to collate more in-depth data on the impact of conducting surveys and interviews with young people about their mental health on parents and teachers. This study has been designed with the involvement of both parents and teachers who report that this information is vital to understand. Anecdotally, some parents and teachers have given feedback on how the previous study (ref number: 20/NSP/037), where young people aged 11-

14 years conducted online surveys and remote interviews) opened up channels of communication between the adult and child that may not have otherwise taken place. Several parents/teachers got in touch to highlight how beneficial participating in the research study had been in this regard. Furthermore, teachers have also highlighted how their experiences during the COVID-19 pandemic have been side-lined and informed us they would like more opportunity to have their voices heard. The aim of this study is to explore these experiences of teachers and parents of young people who completed either/both the online questionnaire and interviews. Up to now we have interviewed 7 (out of 10) parents and are looking interview teachers after Easter.

- **The TELL study:** Emma Ashworth is collaborating with University of Manchester on this ESRC impact acceleration funded study which has investigating impact of COVID-19 on 16-19 year olds and produced video, resources, and school lesson plans. This has resulted in the publication of a paper and 2 reports. <https://www.seed.manchester.ac.uk/education/research/impact/teenagers-experiences-of-life-in-lockdown/>. Findings have been covered by BBC North West Tonight, the Times Education Supplement, and the Conversation.
- **Experience of time:** The lockdown has resulted in significant changes to all aspects of daily life and COVID19 will have impacted on our real-world time experience. This has provided a unique opportunity for psychologists to study how changes in the structure of our daily life influence our experience of time. Ruth Ogden has been investigating factors which influence 'normal' time experience and time experience during lockdown. Ruth has given over 17 media interviews on this topic and the press release following the publication of her PLoS one paper on 'The passage of time during the UK Covid-19 lockdown' was covered by a significant number of other outlets; for example, Science Daily, Medical Express, Newswise, Technology Networks, Health News Digest, Thinkingport, Science codex, Ethical Editor, Brinkwire, Refinery29, Home Heath Choices, News Adode, Eurekalrt, Yahoo Finance, Yahoo Sport, MSN, Fortune.com

Education

- David Putwain (APSS), with Wendy Symes (University of Potsdam) and Zhané Marsh-Henry (The Microbiology Society) undertook a survey of students starting 6th form and university in October and November 2020 to gauge their feelings about cancelled GCSE, A Level and BTEC examinations over summer 2020. Results show a wide variety of emotional responses including relief, disappointment, anger, and gratitude. Students tended to experience more relief and gratitude when they did not expect to have done well. In contrast, when students expected success, they were more likely to experience anger and disappointment. It was clear that many students felt let down and 'in the dark' over how replacement grades were calculated which contributed to uncertainty and elevated anxiety about future examinations. This work has led to two interviews with BBC Radio Merseyside and a podcast recorded with the CEO of the Oxford, Cambridge and RCA (OCR) exam board. A publication based on this work is currently under review.

Health And Fitness

- **The role of digital-physical activity during the UK COVID-19 lockdown.** Sue Cronshaw: using three areas of well-being, psychological, physical and social (Grant, Christianson and Price, 2007) this study explored the perceptions of consumers engaging in digital-physical platforms and communities during the UK COVID-19 lockdown and the impact such participation had on their well-being. Participants discussed the benefits to their mental health, the provision of structure to their day, the social connection it provided and the alleviation of feelings of isolation. The findings also demonstrate how numerous consumer groups in society could use digital-physical platforms as a potential way of connecting those who are unable to engage in face-to-face settings.
- **The HERizon Project.** Emma Cowley (PhD student) led the HERizon Project, a home-based multi-component physical activity intervention for adolescent girls in the UK and Ireland which coincided with the initial COVID-19 lockdown restrictions. Female participants aged 13 to 16 years old were randomly allocated to either the HERizon group or a wait-list control group. Participants in the six-week HERizon group were asked to complete three PA sessions each week and engage in weekly behaviour change support video calls. The HERizon group gained improved physical fitness and psychosocial outcomes demonstrating the benefits of the home-based intervention. This pilot study has now been published with her supervisors Anton Wagenmakers, Paula Watson, Lawrence Fowweather and Dick Thijssen. [Children | Free Full-Text | Formative Evaluation of a Home-Based Physical Activity Intervention for Adolescent Girls—The HERizon Project: A Randomised Controlled Trial \(mdpi.com\)](#)

Science And Technology

- **Aerosol generating dental procedures could provide a route for COVID19 transmission.** A technical study to enable dental practices to develop and implement measures to minimise or potentially eliminate patient and dental staff exposure to Coronavirus Covid-19 was funded by the LJMU COVID rapid response grant (£8.5K). Research undertaken by Ian Jenkinson (FET) and Touraj Ehtezazi (PBS) with David Evans from LCR4 Start in collaboration with Dental practitioners A paper giving full details of the project to the wider dental community was published in British Dental Journal in January 2021 <https://www.nature.com/articles/s41415-020-2504-8> and an article on this paper is scheduled to due to feature in the Research Insights section of the journal. [Research confirms severity of COVID hazards for dentists | Liverpool John Moores University \(ljmu.ac.uk\)](#). The research demonstrated the presence in dental aerosols of submicron-sized particles capable of transmitting the SARS-CoV-2 virus during dental Aerosol Generating Procedures (AGPs). These were found to be eliminated following an AGP, through a combination of aerosol-suppressing interventions (intra-oral low and high-volume suction and an Air Cleaning System (ACS)). The number of particles <0.3 µm generated during an AGP was substantially elevated (even in the presence of aerosol-suppressing interventions). The work demonstrated the importance to dental teams of wearing of FFP3 masks while conducting the procedures studied. The use of aerosol-suppressing interventions including an ACS operating at 24 ACH (Air Changes per Hour) was effective in rapidly reducing particle concentrations to within the background range. The work indicated the possibility of eliminating Fallow-time (time between patients in the treatment room), which is currently 30 minutes between patients. It contributes to making surgeries safe while enabling a return of patient through-put to pre-Covid levels. The project stimulated the formation of a multidisciplinary team working collaboratively (and remotely) with working dental practices, and a commercial Digital Dental Technology to solve a real problem.

3. International Activities

In addition to the regional and national contributions staff across LJMU have undertaken international studies and projects with International collaborators on the COVID19 pandemic.

- **Middle East and North Africa**

Marie Claire Van Hout from PHI has adapted her existing research projects in the Middle East and North Africa with the Middle East and North African Harm Reduction Secretariat MENAHRA with UNODC and UNRWA on drug use, harm reduction and COVID-19 in the region; including in humanitarian and refugee settings to include or focus on the impact of COVID on this vulnerable population.

- Repurposed internal LJMU GCRF funding towards 'Understanding and responding to substance use and abuse in Palestinian refugee camps during COVID-19 in Lebanon'. This project involved working collaboratively with Mr Elie Araj (Executive Director) from the Middle East and North Africa Harm Reduction Association (MENAHRA)/Middle East and North Africa Network of/for People who use Drugs (MENANPUD), Dr Seita Akihiro (Director of Health), United Nations Relief Works Agency for Palestinian Refugees (UNRWA) and Mr Wadih Maalouf (Drug Prevention Branch). United Nations Office on Drugs and Crime. Resulting in two reports
 - Assessment of Situation and Response of Drug Use and its Harms in the Middle East and North Africa 2020.
 - Harm Reduction Advocacy Tools in the Middle East and North Africa 2020.
- Obtained 2020-2021 LJMU GCRF funding on COVID in prisons; A situation assessment of multi-stakeholder experiences, prison system preparedness and health, penal and judicial measures taken to mitigate COVID-19 in Malawian and Zimbabwean prisons. (£26.8K)
- Successfully bid for 2 Rapid Response Grants (2020)
 - Assessing knowledge and use of novel tobacco products in young adults particularly during the COVID 19 pandemic. The WHO Eastern Mediterranean Regional Office Special Grant for Research in Priority Areas of Public Health, 2020 – 2021.
 - Scoping research on the nexus between health rights and statelessness in the context of COVID-19 in Europe. European Network on Statelessness ENS.
- A Hillis (PGR) included COVID aspects to their research; Sex tourism, disease migration and COVID-19: Lessons learnt and best practices going forward.
- Existing portfolio of work in African prisons continued, published 5 papers on the health of prisoners, children in prison and staff during the pandemic.

- **Law Enforcement and Public Health**

Michelle McManus from School of Justice Studies is:

- presenting at the International Law Enforcement and Public Health conference (March 2021) as I am the UK and Western European lead on 'Envisaging the Future for policing and public health globally' and presenting as part of the global symposium, along with colleagues representing findings from the rest of the world. This project seeks to respond in a timely way to the current attention and reflection on the role of policing in addressing complex issues with health, criminal justice and social justice impacts and implications at their core. The global aims of the project are to identify, document, showcase

and increase accessibility of practical, alternative initiatives aimed at achieving community safety and well-being across a wide range of settings globally, with Covid-19 a key consideration in learning and sharing going forward.

- co-convenor of the Global Law Enforcement and Public Health Association Special Interest Group on Law Enforcement and Emergencies: Covid19 has presented a significant challenge to all nations of the world. It has and continues to severely test the preparedness of governments and the strategies that they have formulated in response. Covid19 is a test case for governmental preparedness (or lack of) and has highlighted many of the challenges faced by law enforcement in health emergencies related to infectious diseases. Given this, it is perhaps timely that a SIG with focus upon health emergencies is created. The purpose of this GLEPHA SIG is then to explore the roles of and challenges experienced by law enforcement during health emergencies, particularly those caused by infectious diseases. This will incorporate roles of LE in naturally occurring infectious diseases and caused by intentional or accidental release of biological pathogens. We ran our first global workshop on this with leaders across the world on 9th March 2021.
- **Other GCRF funds repurposed to COVID-19 projects with a global impact:**
 - **Dr Tori Sprung** (Faculty of Science) was awarded funding to develop online exercise and physical activity resources and monitoring for office based staff in Brazil and the UK who are based at home during COVID-19 lockdown.
 - **Professor Valerie Fleming and Dr Sean MacKay** (Faculty of Health) are working with partners in Uganda examine the readiness of nurses and midwives to care for patients with COVID-19, and to investigate the impact of isolation on women with young children.
 - Pallangyo, E., Nakate, M.-G., Maina, R. & Fleming, V. (2020). The impact of covid-19 on midwives' practice in Kenya, Uganda and Tanzania: A reflective account. **Midwifery, 89**, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7263241/>
 - Luyben, A, Fleming, V. & Vermeulen, J. (2020). Midwifery education in COVID-19- time: Challenges and opportunities. **Midwifery, 89**
 - **Dr Cynthia Akwei** (Business and Law) is working with partners in Ghana to model the effect of COVID-19 disruption on food security and hunger.
 - **Professor Serge Wich** (Science) and Professor Steve Longmore (Engineering & Technology) are working with wildlife partners in the UK and Indonesia to develop early detection systems in great apes, to identify signs of viral infection using thermal imaging.
 - **Professor Zaili Yang** (Engineering & Technology) is working with partners in China to develop effective logistics strategies to enhance the resilience of emergency logistics chains (e.g. medical and food), and to develop the first real-time COVID-19 dynamic risk index system for monitoring outbreaks in cities.
 - Epidemic Diseases (EDs) present a significant but challenging risk endangering public health, evident by the outbreak of COVID-19. Compared to the other risks affecting public health such as flooding, EDs attract little attention in terms of risk assessment in the current literature. It does not well respond to the high practical demand of advanced techniques capable of tackling ED risks. To bridge this gap, an adapted fuzzy evidence reasoning method is proposed to realize the quantitative analysis of ED outbreak risk assessment (EDRA) with high uncertainty in risk data. The results provide useful insights for the regulatory bodies to 1) understand the risk levels of different EDs in a quantitative manner and 2) the sensitivity of different EDs to the identified risk factors for their effective control. For instance, in the case study, we use real data to disclose that

influenza has the highest breakout risk level in Beijing. The proposed method also provides a potential tool of evaluating the out risk of COVID-19.

- Drafting a second paper, relating to cruise line vulnerability analysis due to COVID-19. It is submitted to International Conference on Asian Shipping and Logistics.
- **Dr Angela Daly** (school of Education) repurposed part of her internal GCRF grant to research the role of education in emergencies including responses during the current pandemic to publish and make available resources to organisations who support Nepalese children of migrant families working in seasonal brick kilns during the global pandemic. Dr Angela Daly (PI, School of Education), Alyson Hillis (IPH), B.K. Shrestha and S.M. Shrestha (Global Action Nepal) collaborated during lockdown to share research with interest groups and academics. Resources specifically to on COVID-19 include the following:
 - Daly, A., Hillis, A. Shrestha S.M. and Shrestha, B.K. (2021). Breaking the child labour cycle through education: issues and impacts of the Covid-19 pandemic on children of in-country seasonal migrant workers in the brick kilns of Nepal. Viewpoint Children's Geographies. [accepted 12February21] <https://www.tandfonline.com/doi/full/10.1080/14733285.2021.1891406>
 - Angela Daly and BK Shrestha (18th July 2020) Education and Emergencies: education responses to Covid-19. British and Nepalese Non-Governmental Organization network (BRANNGO). International Webinar, 18th July 2020. <http://www.branngo.org.uk/branngo-education-working-group/>

4. Dissemination and Esteem

Awards and Prizes

- Dr Jackie Douglas from Liverpool Business School was awarded the prestigious *ILSSI Academic Research Excellence Award 2021* for her paper '*Six Sigma to distinguish patterns in Covid-19 approaches*' co-authored with Jiji Antony and Willem Salenttijn. The presentation will be made during the next International Lean Six Sigma Institute conference.



Advisory Positions

- Prof. Constantinos Maganaris
 - Appointed as advisory member of Public Health England on modelling the effect of physical activity on falls in older people due to Covid-19.
- Prof Marie Claire Van Hout
 - Global expert representing UN agencies and international NGOs. Consultation exercise for HIV in prison within a multi infection response during COVID-19 in the upcoming UNAIDS Strategy 2021-2026: Fast Track to end HIV/AIDS. HIV in Prisons Unit, UNODC: Vienna.
 - Crime prevention and criminal justice responses to gender-based violence against women in the context of COVID-19. Crime Prevention and Criminal Justice, Justice Section, Division for Operations, United Nations Office on Drugs and Crime, Vienna, Austria.
 - Harm Reduction Advocacy during COVID-19 in Middle East and North Africa Middle East and North Africa Harm Reduction Association (MENAHR).
- Professor Rex Li
 - Invited by UKRI to provide input into the funding scheme of 'Research and innovation ideas to address Covid-19'.
 - Invited by AHRC and ESRC to review Covid-19 grant applications and to become panel members for making decisions on Covid funding applications.
 - Invited to join the UK Cabinet Office's Covid-19 Expert Database.
- Dr Kerry Wilson
 - Member of UKRI AHRC COVID19 Expert Peer Review Group
 - Member of the peer review panel for the UKRI MARCH mental health network Plus Funds scheme, which is also encouraging applications in response to the pandemic.
 - Member of the advisory panel for the AHRC-funded project 'COVID-19 CARE: Culture and the Arts, from Restriction to Enhancement: Protecting Mental Health in the Liverpool City Region', led by Prof Josie Billington at the University of Liverpool.
- Dr Rob MacDonald
 - Appointed to Edge Hill University School of Medicine Service Users and Carers Council.

Reports

- This report was led by Lisa Jones (PHI) and supported by a working group of public health experts and academics from across the City is on the **Direct and Indirect Impacts of COVID19 on Health and Wellbeing (version 2)**. <https://www.ljmu.ac.uk/~media/phi-reports/2020-07-direct-and-indirect-impacts-of-covid19-on-health-and-wellbeing.pdf>
- Marie Claire Van Hout produced two reports for the Middle East and North African Harm Reduction Association Secretariat, Lebanon.
 - Assessment of Situation and Response of Drug Use and its Harms in the Middle East and North Africa 2020.
 - Harm Reduction Advocacy Tools in the Middle East and North Africa 2020.
- The final report on Civil Liberties from LJMU Law was published <https://static1.squarespace.com/static/567aa428a128e661e5c98a71/t/5fad56f0e741ef42c9b0402a/1605195578198/civil-liberties-report-v2-4+copy.pdf>
- The ALICE study evidence briefing. Liverpool John Moores University. <http://www.researchgate.net/publication/348750416> Young people's mental health and wellbeing in the north west during the COVID-19 pandemic The ALICE study evidence briefing
- Dr McManus's Welsh Government and National Independent Safeguarding funded evaluation is now complete and available: Dr. Michelle McManus & Dr. Laura Boulton (2021). Evaluation of Integrated Multi-Agency Operational Safeguarding Arrangements in Wales'. NISB/Welsh Government. National Evaluation of Multi-Agency Operational Safeguarding Arrangements in Wales – Phase 1 - Safeguarding Board Wales
- As a member of the International Lipid Expert Panel (ILEP) Peter Penson helped produce a set of recommendations regarding the management of individuals with familial hypercholesterolaemia (FH) during COVID-19 (Joint ILEP / FH Europe) <https://doi.org/10.1016/j.phrs.2020.104891> and an International Lipid Expert Panel / FH Europe Statement on COVID-19 <https://doi.org/10.1016/j.phrs.2020.104891>

Blogs / Conversation pieces

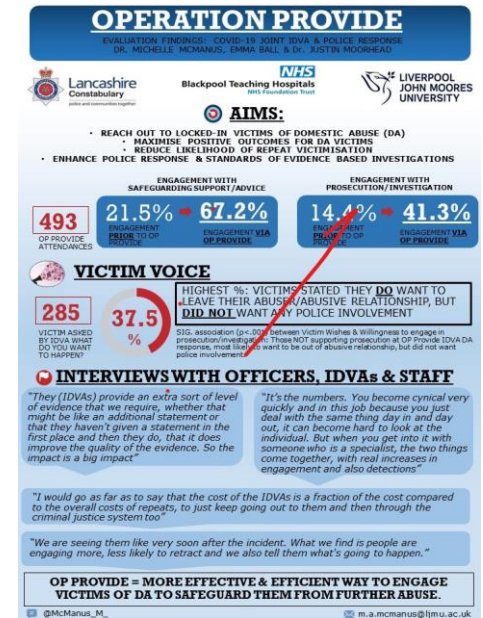
- Blog by Hazel Andrews: Watching Our Borders: Tourism, Brexit and Covid-19 <https://bit.ly/3vCErd1>
- Blog by Madeleine Petzer: COVID-19: How to reduce stress and maintain a work-life balance while working from home https://www.cipd.co.uk/Community/blogs/b/the_people_profession_now_and_for_the_future/posts/covid-19-how-to-reduce-stress-and-maintain-a-work-life-balance-while-working-from-home
- Emma Ashworth co-wrote the following
 - <https://theconversation.com/young-people-reveal-the-struggles-of-lockdown-and-how-they-coped-149603>
 - <http://blog.policy.manchester.ac.uk/health/2020/10/teenagers-experiences-of-life-in-lockdown-and-lessons-for-covid-19-recovery-plans/>
- Peter Penson wrote a piece for 'The Conversation' which received >20,000 reads <https://theconversation.com/could-we-use-statins-to-treat-covid-19-150104>
- Ruth Ogden wrote an Invited opinion piece for *Cognitive Psychology Bulletin* on Why Covid-19 might be making us lose our sense of time.

- Claire Stewart et al. are currently writing a piece based on their review on Sarcopenia during COVID-19 lockdown restrictions: long-term health effects of short-term muscle loss for The Conversation.
- Sarah Schiffing (B&L) has written several pieces with Liz Breen from University of Bradford.
 - Breen L and Schiffing S (2021). *Vaccine supply chains: Collaboration is the key to success*. International Purchasing and Supply Education and Research Association <https://ipsera.com/page-1636091/10160676>
 - Schiffing S and Breen L (2021). *The UK's speedy COVID-19 vaccine rollout: surprise success or planned perfection?* The Conversation <https://theconversation.com/the-uks-speedy-covid-19-vaccine-rollout-surprise-success-or-planned-perfection-155922>
 - Breen L and Schiffing S (2021). *COVID-19 Vaccine Logistics: How Have Digital Hotspots Supported The Rollout?* The Institute of Engineering and Technology Magazine <https://communities.theiet.org/blogs/822/7152>
 - Breen L and Schiffing S (2021). *The Long Road Ahead: The Vaccine Supply Chain Challenge*. International Investor Magazine <https://issuu.com/intinvestor/docs/iimag-issue-7-final>
 - Breen L and Schiffing S (2021). *COVID vaccine supply is causing an EU crisis – so what's being done to speed up production?* The Conversation <https://theconversation.com/covid-vaccine-supply-is-causing-an-eu-crisis-so-whats-being-done-to-speed-up-production-154153>
 - Schiffing S and Breen L (2021). *COVID vaccine: some waste is normal – but here's how it is being kept to a minimum*. The Conversation <https://theconversation.com/covid-vaccine-some-waste-is-normal-but-heres-how-it-is-being-kept-to-a-minimum-152772>
 - Schiffing S and Breen L (2020). *COVID vaccines are starting to arrive – here's how everyone will get them*. The Conversation <https://theconversation.com/covid-vaccines-rollout-has-started-heres-how-everyone-will-get-them-151498>
 - Breen L and Schiffing S (2020). *Vaccines are here, but how will we get them to billions of people?* The Conversation <https://theconversation.com/vaccines-are-here-but-how-will-we-get-them-to-billions-of-people-151132>
- Patricia Jolliffe Lockdown April 2020 Survey: <https://theconversation.com/coronavirus-shows-key-workers-need-better-pay-and-protection-heres-what-has-to-change-137037>
- Currin, H., Barrett, G., Marshall, D., & Murray, E. (2020). 'Doing' well-being in the midst of a global pandemic: Post-publication musings from the National Evaluation of the Royal British Legion Breaks Service Project. <https://www.ljmu.ac.uk/about-us/news/blog/2020/6/1/doing-wellbeing-in-the-midst-of-a-global-pandemic>
- Kay-Flowers, S. (2020) How to handle the next lockdown and Christmas – some tips for recently separated parents, 05.11.20. Available at: <https://theconversation.com/how-to-handle-the-next-lockdown-and-christmas-some-tips-for-recently-separated-parents-147811> - 3,680 readers
- Kay-Flowers, S. (2020) Children of separated parents: The impact of the COVID-19 pandemic [blog] 29th September 2020. Available at: <http://www.transformingsociety.co.uk/2020/09/29/children-of-separated-parents-the-impact-of-the-covid-19-pandemic/>
- Helen Collins and Tricia Harrison co-authored an article for The Conversation on how the Coronavirus shows that key workers need better pay and protection <https://theconversation.com/coronavirus-shows-key-workers-need-better-pay-and-protection-heres-what-has-to-change-137037>

- Michelle McManus with Emma Ball and Justin Moorhead have produced an infographic 'Operation Provide' to summarise the finding from her internally funded COVID project on Victims of Domestic abuse and enhancing the police response.

Media Activity

- The report on **Direct and Indirect Impacts of COVID19 on Health and Wellbeing** has been presented at various Committees across Cheshire and Merseyside (including the Health and Social Care Select Committee) and has been featured on BBC Radio Merseyside (interview with Hannah Timpson on 21st July) and the Liverpool Echo <https://www.liverpoolecho.co.uk/news/liverpool-news/four-waves-coronavirus-effects-expected-18630989>
- Ruth Ogden has been interviewed over 20 different times on the 'experience of time during lockdown' including
 - USA Today** about why we're confused about what day it is. https://amp.usatoday.com/amp/5152593002?_twitter_impression=true
 - Wired Magazine** published an interview about time distortion during lockdown <https://www.wired.com/story/coronavirus-time-warp-what-day-is-it/>
 - Interviewed by Hanna Rosin for **National Public Radio (USA)** about time perception <https://www.npr.org/2020/05/18/858236566/a-woman-with-dyschronometria-shares-her-experience-of-losing-track-of-time?t=1589841136156&t=1594127995350>
 - Interviewed by Trey Yingst for **Fox News** Global Pandemic Special about time experience during lockdown <https://omny.fm/shows/the-fox-news-rundown-1/global-pandemic-our-perception-of-time>
 - Interviewed by Canada's **CTVNews** about my research on time experience during lockdown <https://www.ctvnews.ca/health/coronavirus/losing-track-of-time-researchers-say-this-may-be-why-1.5017540>
 - The **Daily Mail** covered her research on time experience during lockdown <https://www.dailymail.co.uk/sciencetech/article-8509887/Days-slower-40-cent-Britons-coronavirus-lockdown.html>
 - Appeared on **Deutschland Radio** discussing my research about time experience during lockdown. <https://hes32-ctp.trendmicro.com:443/wis/clicktime/v1/query?url=https%3a%2f%2fwww.deutschlandfunknova.de%2fbeitrag%2fupdate%2dnsu%2d2.0%2daff%25C3%25A4re%2dinterview%2dmit%2didil%2dbaydar%2dmp3&umid=ab00d580-70ab-4900-aaf8-e6cf3418de3a&auth=768f192bba830b801fed4f40fb360f4d1374fa7c-6c4f2d32ace1148eb9dac3d08b3142363ae38389>,
 - Provided the daily brief for **Equinox.com** <https://www.equinox.com/landing/check-in-8-10?emmcid=EMM-0810CRMDailyCheckin-M-wbsignups-USCANUK8102020#prevent-time-warps>
 - Interviewed by **Vega Magazine Brazil** about time experience in covid-19 <https://veja.abril.com.br/ciencia/por-que-a-maior-parte-das-pessoas-perdeu-a-nocao-do-tempo-na-quarentena/>



- Appeared on the **BrainsOn.org** podcast for children discussing how time experience has changed during coronavirus.
<https://www.brainson.org/episode/2020/10/06/past-present-and-future-using-time-to-understand-this-pandemic>
- Emma Ashworth was recently invited on to BBC Radio Merseyside 'Happy Heads' programme to discuss the impact of COVID on young people
- Samantha Brooks has written 2 blogs for the Harfield Village Newsletter (Cape Town, South Africa)
 - <http://harfield-village.blogspot.com/2020/05/dreams-and-covid19-lockdown-why-is.html>
 - <http://harfield-village.blogspot.com/2020/04/the-cognitive-neuroscience-of-covid-19.html>
- Angela Daly and BK Shrestha (18th July 2020) *Education and Emergencies: education responses to Covid-19*. British and Nepalese Non-Governmental Organization network (BRANNGO). International Webinar, 18th July 2020. <http://www.branngo.org.uk/branngo-education-working-group/>
- Sarah Schiffling has also been interviewed and written newspaper articles including some European publications:
 - *Radio Scotland Drivetime, interview on vaccine waste. 2021* <https://www.bbc.co.uk/sounds/play/m000s3sh>, BBC
 - *The Roy Green Show, Corus Radio Network, Canada.. 2021* <https://omny.fm/shows/roy-green-show/the-roy-green-show-podcast-january-31st-featuring>
 - The Sydney Morning Herald, "A Hollywood film and a cunning plan: how Britain got its vaccine rollout right". 2021 <https://www.smh.com.au/world/europe/a-hollywood-film-and-a-cunning-plan-how-britain-got-its-vaccine-rollout-right-20210209-p57117.html>
 - Sky News, Ian King Live, Lumps and Bumps in Supply Chain not Unexpected, 18th March 2021, <https://news.sky.com/video/lumps-and-bumps-in-supply-chain-not-unexpected-12249559>
 - BBC News, Vaccine Supply Chain Challenges, 18th March 2021, <https://www.bbc.co.uk/programmes/m000t8z5>
 - ZDF, Heute in Europa, Germany, Spitzenreiter beim Impfen, 28th January 2021, <https://www.zdf.de/nachrichten/heute-in-europa/spitzenreiter-beim-impfen-100.html>
 - BBC News, Outside Source, Waste in the Vaccine Supply Chain, 18th January 2021, <https://www.bbc.co.uk/programmes/m000rnzx>
 - Euronews, Good Morning Europe, COVID vaccine: From factory to arm, the logistics of rolling out the Oxford-AstraZeneca jab, 13th January 2021, <https://www.euronews.com/2021/01/13/covid-vaccine-from-factory-to-arm-the-logistics-of-rolling-out-the-oxford-astrazeneca-jab>
 - BBC Newscast, Sturgent Update, 19th March 2021, <https://www.bbc.co.uk/sounds/play/p09b4vzj>
 - BBC Radio Scotland, Good Morning Scotland, Where do the COVID Vaccines come from?, 20th March 2021, <https://www.bbc.co.uk/programmes/m000tdf0>
 - BBC Radio Cumbria, Breakfast, International Vaccine Supply Chains, 19th March 2021, <https://www.bbc.co.uk/sounds/play/p098byc5>
 - BBC Radio 4, World at One, Vaccine Supply Chains, 18th March 2021, <https://www.bbc.co.uk/sounds/play/m000t6lb>
 - BBC 5 live, Wake up to Money, Lumpy Supply, 18th March 2021 <https://www.bbc.co.uk/sounds/play/m000t5qz>
 - BBC Radio Scotland, Good Morning Scotland, Vaccine Supply Interruptions, 18th March 2021, <https://www.bbc.co.uk/sounds/play/m000t63m>
 - BBC Radio Ulster, Evening Extra, Vaccine Supply Chains, 18th March 2021, <https://www.bbc.co.uk/sounds/play/m000t69r>
 - BBC Radio Scotland, Drivetime, Vaccine Waste, 12th February 2021, <https://www.bbc.co.uk/sounds/play/m000s3sh>

- Corus Radio Network, Canada, The Roy Green Show, Vaccine Rollout, 31st January 2021, <https://omny.fm/shows/roy-green-show/the-roy-green-show-podcast-january-31st-featuring>
- BBC News, "India coronavirus: Can its vaccine producers meet demand?", 18th March 2021, <https://www.bbc.co.uk/news/world-asia-india-55571793>
- France24, "Las mujeres detrás de la vacuna Oxford/AstraZeneca", 8th March 2021, <https://www.france24.com/es/europa/20210308-las-mujeres-detr%C3%A1s-de-la-vacuna-oxford-astrazeneca>
- The Sydney Morning Herald, Australia, "A Hollywood film and a cunning plan: how Britain got its vaccine rollout right", 13th February 2021, <https://www.smh.com.au/world/europe/a-hollywood-film-and-a-cunning-plan-how-britain-got-its-vaccine-rollout-right-20210209-p571117.html>
- Al Jazeera, "COVID: How has the UK managed to master the vaccine roll-out?", 25th January 2021, <https://www.aljazeera.com/news/2021/1/25/whats-behind-the-uks-covid-vaccination-success>
- Konkret24, Poland, "Utylizacja szczepionek "gigantycznym skandalem"? Nie, to trzeba uwzględnić", 22nd January 2021, <https://konkret24.tvn24.pl/zdrowie,110/utyliczacja-szczepionek-gigantycznym-skandalem-nie-to-trzeba-uwzledniac,1045836.html>
- Le Figaro, France, "Covid : la France anticipe-t-elle réellement 25 à 30% de pertes sur ses vaccins?", 6th January 2021, <https://www.lefigaro.fr/sciences/covid-la-france-anticipe-t-elle-reellement-25-a-30-de-pertes-sur-ses-vaccins-20210106>
- Mark Forshaw has made over 30 appearances on national and local TV and radio since establishing the group and has been extensively quoted within media articles including:
 - *Liverpool Local (TV)*
 - <https://www.youtube.com/watch?v=vvNJXfsKBHA>
 - https://www.youtube.com/watch?v=7mNEgcJop_4
 - <https://www.dailymotion.com/video/x7vpm9e>
 - <https://www.liverpoolecho.co.uk/news/liverpool-news/university-chief-offers-key-advice-17900560>
 - <https://www.liverpoolecho.co.uk/news/liverpool-news/anti-vaccine-conspiracy-theories-expert-18652400>
- Claire Stewart et al. received two invitations to present seminars regarding their review on Sarcopenia during COVID-19 lockdown restrictions: long-term health effects of short-term muscle loss
 - A webinar for BAPEN on nutritional strategies for rehabilitation.
 - A class/lecture to sports science students at a university in Colombia.
- Sam Roberts has been interviewed about the impact of lockdown on our social relationships and well-being. This has included:
 - An appearance on the BBC News Channel on 26/08/21
 - For an article in the New Scientist about the effect of lockdown on our social relationships with both friends and work colleagues: <https://www.sciencedirect.com/science/article/abs/pii/S0262407920314160>
 - For an article in the Guardian newspaper about the impact of lockdown on Christmas socialising: <https://www.theguardian.com/science/2020/nov/01/why-a-digital-christmas-goes-against-our-instincts>

- Van Hout, MC., Haddad, P., Aaraj, E (2021). COVID-19 and the impact on drug use and harm reduction programming in the Middle East and North Africa (MENA) region: a regional consultation of stakeholders and people who use drugs. Middle East and North African Harm Reduction Association (MENAHR), MENAHR Webinar. February 22nd 2021.

5. Publications

Andrews, Hazel (2021) COVID-19 and Tourism: Intimacy Transformed or Intimacy Interrupted? special edition on COVID-19 and the transformation of intimacy in Anthropology in Action. Journal for Applied Anthropology in Policy and Practice. <https://www.berghahnjournals.com/view/journals/aia/27/2/aia270215.xml>

Andrews, Hazel (2020) COVID-19 Masks but Fails to Flatten Brexit, In Andrews, H (ed) Tourism and Brexit. Travel, Borders and Identity. Bristol: Channel View pp 203-214 <https://www.amazon.com/Tourism-Brexit-Borders-Identity-Cultural/dp/1845417909>

Akinbi A, Foreshaw M, Blinkhorn V. (2021) Contact tracing apps for COVID-19: Challenges and potential. Preprint <https://osf.io/6xbcs/>

Banach M, **Penson PE**, Fras Z, Vrablik M, Pella D, Reiner Ž, Nabavi SM, Sahebkar A, Kayikcioglu M, Daccord M; FH Europe and the International Lipid Expert Panel (ILEP). Brief recommendations on the management of adult patients with familial hypercholesterolemia during the COVID-19 pandemic. Pharmacol Res. 2020 Aug;158:104891. doi: 10.1016/j.phrs.2020.104891.

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<http://researchonline.ljmu.ac.uk/id/eprint/14347/>

Cowley ES, Watson PM, Foweather L, Belton S, Mansfield C, Whitcomb-Khan G, Cacciatore I, Thompson A, **Thijssen D, Wagenmakers AJM.** (2021) Formative Evaluation of a Home-Based Physical Activity Intervention for Adolescent Girls—The HERizon Project: A Randomised Controlled Trial. *Children* **2021**, *8*(2), 76; <https://doi.org/10.3390/children8020076>

Crowley, D., Cullen, W., O’Donnell, P.E., **Van Hout, MC** (2020). Prison and opportunities for the management of COVID-19. British Journal of General Practice. 4 (3) bjgpopen20X101106.

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Ehtezazi, T., Evans, D., Jenkinson, I. et al. SARS-CoV-2: characterisation and mitigation of risks associated with aerosol generating procedures in dental practices. *Br Dent J* (2021). <https://doi.org/10.1038/s41415-020-2504-8>

Ganjali S, Bianconi V, **Penson PE**, Banach M, Watts GF, Sahebkar A. (2020) Commentary Statis, COVID-19 , and coronary artery disease: killing two birds with one stone. *Metabolis*, 113, 154375 <https://doi.org/10.1016/j.metabol.2020.154375>

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Hannibal, Claire (editor) Special issue of *Supply Chain Management: An International Journal* on the topic of Covid-19 and supply chain management. http://www.emeraldpublishing.co.uk/products/journals/call_for_papers.htm?id=9001 (available summer 2021)

Kirwan, R., McCullough, D., Butler, T., **Perez de Heredia, F., Davies, I. G., & Stewart, C.** (n.d.). Sarcopenia during COVID-19 lockdown restrictions: long-term health effects of short-term muscle loss. *GeroScience*. doi:10.1007/s11357-020-00272-3

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<https://www.hhrjournal.org/2020/09/covid-19-urgent-need-to-release-women-from-prison-in-malawi/>

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<https://www.hhrjournal.org/2020/05/leaving-no-one-behind-the-human-tragedy-of-children-in-african-prisons-during-covid-19/>

Appendix 1: **Database of LJMU COVID19 projects**

Key contact(s)	Research Focus	Summary of research activity	Progress to Date
Lisa Jones & Hannah Timpson	Health and Equity in COVID19 Recovery Planning.	The Health & Equity in Recovery Plans Working Group is co-chaired by Lisa Jones and includes representatives from PHI (Hannah Timpson, Cath Lewis, Janet Ubido). This work will directly influence and have a demonstrable impact on the extent to which the Liverpool and LCR recovery plans support health and wellbeing, and especially the health and wellbeing of our most vulnerable populations. This research will feed into local recovery plans through the MRF Multi Agency Intelligence Cell (MAIC)	Ongoing: The rapid evidence review was published in July: https://www.ljmu.ac.uk/~media/phi-reports/2020-07-direct-and-indirect-impacts-of-covid19-on-health-and-wellbeing.pdf Planning for the health impact assessment is underway.
Hannah Timpson	Assessing unmet need in communities.	Developed a research proposal to carry out community-based research with Third Sector organisations, to understand more about the needs of vulnerable groups (including who these are). The research has been developed with key partners and is supported by VS6, an organisation representing the ~8000 voluntary groups across the Liverpool City Region.	The research is underway and has gathered interest from a range of organisations across Cheshire and Merseyside.
Zara Quigg	understanding the impacts of Covid-19 on violence against women and girls.	Zara Quigg has been leading a study in collaboration with the London School of Hygiene and Tropical Medicine to conduct a rapid assessment of the impacts of COVID-19 on violence against women and children across the European Region, and public health responses to assist WHO in supporting country prevention and response efforts.	WHO funded. Information is being collected via a survey and review of press and policy documents. Key findings will be shared in Autumn 2020 via a range of outputs.
Viv Hope	The PHOENIX Study:	Viv is leading the PHOENIX study, a quantitative and qualitative study across the North West to explore the impacts of Covid-19 restrictions and guidance on wellbeing of diverse population groups. A multi-disciplinary team of researchers from PHI and Psychology are working on this project. The project has three phases: Phase 1 is baseline survey (complete); Phase 2 is a series of follow-up surveys; and Phase 3 qualitative interviews. Phases 2 and 3 are ongoing.	The project has been funded by the LJMU COVID19 fund. The online survey has been completed by 1604 people (with analysis underway); two follow-up surveys have been completed, a third is in progress; and almost 45 people have taken part in qualitative interviews to date.
Lisa Jones	Collaborative study	Exploring links between the Liverpool-Madrid match and the impact of coronavirus on the city with Matt Ashton	Underway

Key contact(s)	Research Focus	Summary of research activity	Progress to Date
Mark Whitfield	Incorporating Covid-19 surveillance into PHI Intelligence and Monitoring Systems.	<p>PHI IMS have implemented a number of ways to capture the impact of COVID-19 and government restrictions on both people attending A&E departments and vulnerable adults using services such as needle and syringe programmes (NSP). The team have: Implemented a telephone survey with all NSP providers across Cheshire and Merseyside in order to assist commissioners and providers understand the impact of social distancing measures on NSP service provision.</p> <p>Introduced a COVID-19 pop up for services that use IMS Online to collect data, recording self-reported responses to questions around social distancing and access to basic necessities</p> <p>The team have provided weekly reports providing a detailed overview of NSP activity since the onset of the pandemic, used by local authority resilience planning forums and by PHE's NW commissioner and provider network in order to ascertain the impact of restrictions on NSP coverage.</p>	Accepted for publication by the International Journal of Drug Policy entitled: "The impact of COVID-19 restrictions on needle and syringe programme provision and coverage in England". Also produced monthly reports, circulated to all partners to evidence the drop in trauma related attendances during the current lock-down period and provide intelligence on the impact of lockdown on specific areas of injury such as assaults in public places and those which have taken place in the home.
Zara Quigg	response to domestic abuse during Covid-19 and beyond.	Wirral Council has asked for academic support (via LHP) for involvement in their partnership response to domestic abuse during Covid-19 and beyond. PHI will support this and align with wider WHO research, and related violence reduction work across Cheshire and Merseyside.	ongoing
Ivan Gee	collaborative study to explore whether smokers view COVID as a threat or a stress	Collaborating on a COVID project led by Prof Sarah Grogan at MMU who we have an existing joint LJMU/MMU PhD studentship with. The project will be a national study to explore whether smokers view COVID as a threat or a stress and the impact that perception has on their likelihood of quitting and consumption	Data collection has been completed with 270 smokers completing the survey. Qualitative responses have been analysed and a paper published. Analysis of quantitative responses is ongoing.
Marie Claire Van Hout	International Public health	Scoping research on the nexus between health rights and statelessness in the context of COVID-19	European Network on Statelessness. United Kingdom. £12,780, PI, 2020
Marie Claire Van Hout	Expert Public Health Policy	Consultant on crime prevention and criminal justice responses to gender-based violence against women in the context of COVID-19.	UNODC. Global HQ. Austria
Marie Claire Van Hout		Ensuring access to measures for the prevention of mother-to-child transmission of HIV in prisons during and beyond COVID-19	International Expert Prison Health UNAIDS/WHO/UNODC Global consultation.

Marie Claire Van Hout	Consultant on crime prevention and criminal justice responses to gender-based violence against women in the context of COVID-19.	International Expert Prison Health UNODC. Global HQ. Austria. Consultation exercise for tackling COVID-19 and HIV in prison in the upcoming UNAIDS Strategy 2021-2026: Fast Track to end HIV/AIDS.
Marie Claire Van Hout	Assessing knowledge and use of novel tobacco products in young adults particularly during the COVID 19 pandemic.	Special Grant for Research in Priority Areas of Public Health, 2020 – 2021. WHO Regional Office for the East Mediterranean. Egypt. £15,000 Co-Applicant
Marie Claire Van Hout	The impact of COVID-19 on drug use and harm reduction in the Middle East and North African region 2020.	Middle East and North African Harm Reduction Association Secretariat. Lebanon. Principal Investigator
Marie Claire Van Hout	WHO Europe evidence review on what health systems can do to prevent and respond to human trafficking during COVID-19.	Expert Public Health Policy. WHO Health Evidence Network Synthesis. WHO Regional Office for Europe, Denmark

Nursing and Allied Health

Key contact(s)	Research Focus	Summary of research activity	Progress to Date
Ian Jones Anitra Malin		Should I stay or should I go? An exploration of the decision making behaviour of acute cardiac patients during the Covid-19 pandemic.	Funded via internal COVID bid. Project started 2021
Valerie Fleming	Maternity care	Contributing to UoL led (Jo Harrold) UKRI application looking at “How is COVID-19 influencing maternity care and the experiences of both women and maternity care providers across a disadvantaged area within the North West?”	UKRI application under development
Valerie Fleming	Liverpool Health Commission: First 1000 days of life	The Commission has been collecting qualitative data from professionals and service users on health matters for both mothers and babies and is uniquely placed to offer analysis of pre and post-Covid 19 health impacts on this particularly vulnerable section of our community.	ongoing

Psychology

Key contact(s)	Research Focus	Summary of research activity	Progress to Date
Sam Brooks		Three types of COVID lockdown response: links to neural processes of affect regulation. Using KCL research demonstrating 3 types of lockdown response in UK: accepting, suffering, resisting; Examine the links between online measures of working memory and dream transcripts.	Project ongoing
Emma Ashworth	Impact of COVID on children and young people	The TELL Study – teenagers’ experiences of life in lockdown. Collaborating on a qualitative study led by Dr Ola Demkowicz at the University of Manchester, exploring the perceived impact of COVID-19 and the associated lockdown on adolescents’ mental health and wellbeing.	Data collection completed. Awarded ESRC impact acceleration funding. Produced video, resources, and school lesson plans. There are also 2 reports out and a paper being written up.
Emma Ashworth Pooja Saini Catrin Eames Jen Chopra	Impact of COVID on children and young people	ALICE study (Adolescents’ Lockdown-Induced Coping Experiences) – investigating impact of COVID-19 on 11-14 year olds at LJMU – published evidence briefing on LJMU website and a ‘caring for your wellbeing’ document for young people.	All schools who participated in the study were given a bespoke feedback report outlining the mental health and wellbeing of their pupils. Currently writing papers. Follow on study underway
Emma Ashworth	Impact of COVID on children and young people	The impact of COVID-19 of children and young people with SEND in Liverpool. A collaboration between LJMU, University of Liverpool. Edge Hill University, Alder Hey, and Liverpool Health Partners.	Bid submitted. Recommended for funding and awaiting final decision.
Francis McGlone; Dave Moore; Connor Haggarty	Social touch as a predictor of mood and behaviour during Covid.	Global online study running assessing the impact of social isolation on a number of measures - https://covid.iasat.org The study is running in Chinese, Russian, Spanish, English, Dutch. Includes development of app.	Data Analysis
Daive Bruno Francis McGlone	Self-touch promoting emotional well-being and reducing stress	Investigating the soothing role of self-touch (e.g., touching oneself on the forearm by using video-instructions) in reducing negative affect and stress, providing comfort and promoting well-being the general population.	Data collection
Ruth Ogden	Perceptions of the passage of time	An online survey assessing perceptions of the passage of time during the pandemic. Has resulted in media coverage.	Paper submitted

Key contact(s)	Research Focus	Summary of research activity	Progress to Date
Valentina Cazzato	Affective touch and Eating Disorder Patients.	PGR project on 'The observation of affective touch and the association with eating behaviours'. Will adapt to Investigate how social isolation due to covid-19 has affected patients' experience of touch and eating behaviour. developed a Covid-19 questionnaire, to take into account the current pandemic, to assess the impacts, if any, Covid-19 restrictions i.e., social isolation and touch wanting, have had on affective touch ratings across all groups.	Ongoing PGR project (Ashleigh Bellard) Successful Recruitment and data collection underway.
Kayleigh Sheen	Production of an online training resource for NHS frontline staff and students around the impact of workplace trauma and managing early stress responses.	The training has been distributed by the operational development team, clinical psychology lead and wellbeing leads respectively to staff at Liverpool Royal, Aintree and Liverpool Women's Hospitals in addition to the University of Liverpool Medical students and LJMU Midwifery students. We are evaluating use of the training and collecting views re. the utility. Regional Collaboration with Pauline Slade PI, Liverpool; Helen Spiby, Nottingham; Andrew Weeks, Liverpool Uni, Liverpool Women's hospital; Laura Goodfellow, Countess of Chester hospital.	CO-I on external project Training deployed to frontline.
Sam Roberts		Associations between social networks and changes in loneliness, anxiety and depression during the coronavirus lockdown period. This study examines how the characteristics of participants' social networks before the coronavirus lockdown started are associated with changes in loneliness, anxiety and depression during the lockdown period. It is based on a nationally representative sample and involves 3 waves of data collection in March (n = 500), June (n = 350) and September (n = 200) 2020.	Ongoing, Data collection complete, data analysis underway.
Catrin Eames		Supporting work exploring the psychological and social impact of COVID-19. My work is related to protective (as well as the negative factors) related to suicide prevention and wellbeing, as well as health and social inequalities that exacerbate discrepancy in mental health outcomes. Working with MerseyCare	ongoing
Helen Poole	Staff Wellbeing	Exploring the impact of Covid-19 on the psychological wellbeing of oncology health care professionals. A short (6 months) qualitative project with staff at all levels. With CCC and UoL	Ongoing study funded by Clatterbridge Cancer Charities

Key contact(s)	Research Focus	Summary of research activity	Progress to Date
Helen Poole	Staff wellbeing	Exploring the impact of the COVID-19 pandemic on the psychological well-being of nurses working in the cancer setting across Cheshire and Mersey. With Dr Lynda Appleton (CCC) and other NHS colleagues.	Ongoing study Funded by The Burdett Nursing Trust.
Helen Poole Rachel Tarling		Dis-CoV-er: A non-randomised cohort study during the SARS-CoV-2 pandemic to understand viral exposure and handling by cancer patients. Helen Poole and Rachel Tarling from LJMU are providing support with psychological measures on this study which is in development via UoL and LHP.	Under development
Lisa Newson	Environment KTP	Understanding lifestyle behaviours in the home (result from covid) focusing on health and community a long term not immediate project Cobalt seeks to be a "sector leading community-based housing provider, creating value for stakeholders and wider community, establishing business sustainability and nationally recognised brand identity." Cobalt need to understand their tenant's needs, to improve their lived experiences, quality of life and "community wealth". In addition, COVID-19 has highlighted the importance of localisation of services to tenants needs in the changing environment. This mKTP will be instrumental in transforming Cobalt's organisational culture by creating and embedding organisational skills and competencies, sustainable internal procedures, infrastructure and know-how that will allow Cobalt to implement their strategic vision and understand individual needs.	mKTP- Innovate UK. 2year collaboration between LJMU and Cobalt Housing Association and LJMU (PI Dr Lisa Newson, School of Psychology, and co-investigators Fiona Armstrong-Gibbs and Ioannis Kostopoulos Business Faculty).

Faculty of Science

Pharmacy and Biomolecular Science

Key contact(s)	Research Focus	Summary of research activity	Progress to Date
Sulaf Assi	Understanding the public perception and attitude towards COVID 19	working with colleagues in Birmingham University and Saudi Ministry of Health on understanding the patients' perspectives and attitudes towards COVID1-9 prophylaxis and treatment using social media platforms.	UKRI bid unsuccessful Data analysis being undertaken

Sports and Exercise Sciences

Key contact(s)	Research Focus	Summary of research activity	Progress to Date
Paula Watson Anton Wagenmakers		Home-based online PA intervention for adolescent girls	Part of existing PhD research (Emma Cowley) published polit study and a randomised control trial is underway
Dick Thijseen Ian Davies & Fatima Perez de Heredia (BES) Claire Stewart	Cardiac rehabilitation	Investigating the feasibility of an intervention based on a high-protein Mediterranean-style diet and resistance exercise, alone and in combination, on lean body mass and cardiometabolic health. It consisted of a pilot randomised controlled trial (RCT), combined with focus groups in order to identify potential acceptability, affordability and adherence challenges. Due to Covid-19 restrictions, the pilot RCT will need to be postponed, and modifications have been introduced to conduct the feasibility study online, collecting participants' opinions on our proposed intervention protocols, and adding questions regarding how Covid-19 restrictions are impacting on their eating and exercise habits, and how they perceive that our suggested dietary and exercise protocols could be implemented under the current circumstances.	Feasibility study funded by the NHS Liverpool Clinical Commissioning Group.
Ian Davies & Claire Stewart & Dick Thijseen (SPS) and	Cardiac rehabilitation in COVID-19 isolation	Cardiac rehabilitation in COVID-19 isolation: assessment of online/at home services (CAROLINE). Evaluation of the effectiveness of newly implemented, remotely delivered, cardiac rehabilitation (CR) services in response to COVID-19 restrictions., even in the current climate. Unfortunately, there is no evidence base for entirely remotely delivered phase-4 CR and delivery methods are	IKRI Rapid response call application

Key contact(s)	Research Focus	Summary of research activity	Progress to Date
Fatima Perez de Heredia (BES)		inconsistent across the UK. This study aims to address this COVID-19-related issue by measuring changes in QoL, nutritional intake, physical activity, indices of CVD risk, adherence and attrition, associated to remotely delivered phase-4 CR programmes, with an achievable evaluation study design during current COVID-19 restrictions. Managing CVD remotely in phase-4 CR will decrease the burden on non-COVID-19 NHS activity, and accelerate the future adoption of remote CR, increasing CR uptake in line with the NHS long-term plan	
Fatima Perez de Heredia Ian Davies Claire Stewart		We are supervising the PGR student Richie Kirwan on the project "A high-protein Mediterranean diet and resistance training on the amelioration of cardiometabolic risk markers in cardiac rehabilitation patients with sarcopenic obesity. The PRiME Study".	Existing PGR project (Richie Kirwan)
Claire Stewart		Denis Kusic (PhD) and Ruth Postlethwaite (MSc) have initiated an on-line questionnaire around health and wellbeing during covid19. It is composed of a series of questions relating to activity, sleep and wellbeing. Participants complete the forms on a monthly basis. Initial findings will be examined as part of Ruth's MSc research project.	MSc and PGR projects ongoing
Costis Maganaris		Participated in publication of a position-point paper on the impact of forced sedentarism due to COVID-19 on neuromuscular, cardiovascular and metabolic health. Importantly, recommendations were also made for practical and effective exercise and nutritional countermeasures.	The paper has been published in the latest issue of the European Journal of Sport Science, https://doi.org/10.1080/17461391.2020.1761076

Faculty of Engineering and Technology

Key contact(s)	Research Focus	Summary of research activity	Progress to Date
Ian Jenkinson Touraj Ehtezazi (PBS)		A technical study to enable dental practices to develop and implement measures to minimise or potentially eliminate patient and dental staff exposure to Coronavirus Covid-19	Data gathered and paper published
Thanh Nguyen		Simulation research to investigate and optimise social distancing in public transport in Liverpool City Region. Collaborating with Merseytravel, Merseyrail, LCR Combined Authority	LJMU COVID19 funding Story on LJMU website
Thanh Nguyen		Led a project to understand the effects of social distancing on university facilities	
Steve Longmore Serge Wich		Tourism, great apes, and COVID-19	LJMU GCRF funding
Zaili Yang, Christos Kontovas Chia-Hsun Chang		Emergency Logistics Response to Outbreak Risk of COVID-19: Phase 1 Risk Analysis	LJMU GCRF funding 2 publications ready Yang Zaili Assessing the Outbreak Risk of Epidemics Using Fuzzy Evidential Reasoning, Risk Analysis (in production) Yang Zaili Vulnerability analysis of cruise shipping in ASEAN countries facing COVID-19 submitted to International Conference on Asian Shipping and Logistics
Paulo Lisboa		the stats for a cross-Northwest NHS study on Covid among diabetic patients hospitalised during the last 6 months.	Paper on Clinical characteristics of COVID-19 patients in a regional population with diabetes mellitus: the ACCREDIT study submitted

Faculty of Arts, Professional and Social Studies

Key contact(s)	Research Focus	Summary of research activity / interests	Progress to Date
Kayla Owen		Providing solutions to the COVID PPE crisis. Alder Hey are seeking an alternative supply of gowns or equivalent innovative protective garments. The supply chain is significantly disrupted at this moment in time meaning that health care workers are either not using the appropriate PPE, are having to improvise or simply do not have sufficient supply. This work aligns with local priority as a challenge for Alder Hey specifically. Working with Alder Hey Children's Hospital, Roland Partridge consultant surgeon and surgical lead for COVID19 response.	Providing support
Sara Parker Kay Standing		Periods don't stop for pandemics and neither do we: Dignity without Danger: Menstruation research and activism in Nepal: Sociologists Dr Sara Parker and Dr Kay Standing have continued to work on the British Academy/GCRF funder project 'Dignity without Danger (DWD): Collaboratively analysing stigma and taboos to develop innovative strategies to address menstrual exclusion in Nepal. throughout the current COVID-19 pandemic.	Ongoing research
Anne-Marie Bartlett	Tackling Digital Exclusion:	Tackling Digital Exclusion: Lessons Learned from the Experiences of University Students during the Covid-19 Pandemic. Initial study into the uneven social impacts of Covid-19 on students from Liverpool School of Art and Design. This study will lead into more extensive research examining the impacts of the pandemic on disadvantaged students across LJMU. External funding bid for research focused on accessible information and digital inclusion, with the aim of sharing best practice across UK-based institutions and beyond.	LJMU QR Research Fund (£2000). Date of award: 08/03/21. UKRI Covid-19 bid submitted: 11/12/20 (£95,308.05). Contributors: Ester Ragonese; Phil Carey and Phil Rothwell.
Michelle McManus	Criminal justice, behavioural sciences, children and families	The overall aim of the study is to inform the development of national safeguarding policies and practices regarding domestic abuse (DA) in pandemics and other emergency situations. The WHO (2020) warns of an increased risk of DA in emergencies, including epidemics. Safeguarding refers to protecting the rights of adults and children to live safely and taking necessary steps to protect them from abuse having (reasonable) regard to the wishes of the individual/s concerned alongside a positive duty to promote well-being and positive outcomes. Safeguarding is embedded in statutory guidance (DoE, 2019; DoHSC, 2020) and operationalised via multi-agency working. Safeguarding practices of agencies that aim to identify, respond and	Safeguarding Victims of Domestic Abuse during Covid-19: Challenges and Opportunities. UK Research and Innovation (UKRI). £74,589 (LJMU), £336,676.52 (total award).

Key contact(s)	Research Focus	Summary of research activity / interests	Progress to Date
		support families experiencing DA has changed during Covid-19, but little is known about the impact of such changes (cf. SafeLives, 2020).	
Michelle McManus		Shaping the future of safeguarding Wales. This is seeking to inform safeguarding arrangements in light of covid-19 and beyond, with colleagues from Public Health Institute: Prof Zara Quigg, Dr. Hannah Timpson and Ellie McCoy. This follows on from the successful completion of Phase 1 of the Wales safeguarding project that explored safeguarding practice at the very start of Lockdown 1.	Welsh Government. £106,744.93. PI (Feb, 2021). Phase 1 evaluation report is included in the main document.
Michelle McManus		Completing a large study on - County Lines and Serious Violence Deep Dives - assessing the effectiveness of current multi-agency safeguarding arrangements. CO-Is include: Professor Daniel Silverstone, Emma Ball and also colleagues from PHI: Professor Zara Quigg, Ellie McCoy, Beccy Harrison and Rebecca Bates.	Funded by Home Office and Department for Education: PI (£103,207, Dec, 2020).
Michelle McManus		Ongoing 'Evaluation of Local Solutions' support and mentoring services during covid-19 and beyond'. Co-I's: Dr. Robert Hesketh and Dr. Rachael Steele.	locally funded project by Local Solutions: PI (£5,000. July, 2020):
Michelle McManus		Completed evaluation. Police reporting, recording and responses to domestic abuse in covid-19: how can we best safeguard the silent, repeat and most vulnerable victims in lockdown? Operation Provide Evaluation.	LJMU COVID-19 Pandemic: Rapid Response Grant. £9,500. PI (May, 2020. Awaiting press release
Rob MacDonald	Dementia	"Virtual Dementia Friendly and Covid Safe Care Home A multi professional, service users and carers methodology "Living Lab" or team virtual design approach.	British Academy Grant Application submitted for £10,000
Rob MacDonald	Dementia	<i>Community is the Best Medicine</i> , Design for Dementia resilient Neighbourhoods and Communities	<i>The Kings Fund Virtual Conference</i> , Submission accepted pending review.
Rob MacDonald	Dementia	<i>Design for Dementia during the Pandemic</i> . A collaborative project to design a virtual care home as a conversion of several adjacent terraced houses.	QR Research Fund Application for <u>The Virtual Dementia Care Home for February Submission</u> £2000.
Rob MacDonald	Dementia	Contribution to The European Accessible and Covid Safe City 2021 which is being organised by LCC.	Ongoing
Rob MacDonald	Dementia	The Design of a Dementia and Covid Safe self-contained Pod. The pod has alternative uses for research and teaching space for staff and students.	ongoing

Key contact(s)	Research Focus	Summary of research activity / interests	Progress to Date
Rob MacDonald	COVID experiences	<i>Lockdown Logs</i> written and drawn contributions for Edge Hill University School of Health and Medicine; a collaborative document compiled by NHS Service Users.	Available on request
Rob MacDonald		1 <i>The Healing Role of Therapeutic Arts</i> during The Pandemic; a 7000 word paper for JWAM (<i>Journal of Work Applied Management</i>) Editor Alice Driver, School of Law. Pending Blind Review by Emerald Publishers. 2 <i>Mental Health and Therapeutic Arts in The Design Mental Health Network DIMHN Journal</i> , an auto biographical account of Bi Polar Mental Disorder, during the Pandemic, published, January 2020, pp 29-30.	
Laura Bolton	Policing a pandemic	Policing a pandemic: An exploration of police use of powers during COVID-19, dis-proportionality and the impact on public perceptions of police legitimacy.	British Academy Special Research Grants: Covid-19 awarded.
Joasia Krysa		Working with Leonardo Impett, Computer Science Department, Durham University, and Liverpool Biennial on a project entitled: Visitor Interaction and Machine Curation in the Virtual Liverpool Biennial, The research investigates new models of curating in the light of AI, and more specifically machine learning techniques, taking Liverpool Biennial exhibition as a case study. Using machine learning technologies as 'curators' (rather than search engines) could potentially change the landscape of online exhibitions, which are currently largely websites with predominantly pictures of artworks (and thus look more like exhibition catalogues than the exhibitions themselves). Taking specific context of the Liverpool Biennial 2020-21 edition, the project specifically explores audience interaction with machine-curated online exhibitions, pointing towards possible new hybrid (online and physical) models for biennials and other art exhibitions.	UKRI/AHRC Covid-19 Rapid Response Bid: Strategic Priorities Fund programme Towards a National Collection: Opening UK Heritage to the World, award of £77,192.80, project duration 8 months.
Simone Krueger Bridge		pilot research project with Liverpool Cathedral on "The Digital Turn: The Value of Online Music Making and Participation" as a result of Covid-19.	QR funded and runs from February - July 2021. With plans to develop a larger collaborative funding application

Faculty of Business and Law

Key contact(s)	Summary of research activity	Progress to Date
Rachel Stalker	The Legal Advice Centre in the School of Law is participating in an online civil liberties clinic. Students will examine the Covid-19 emergency legislation and its application in communities across the UK, in collaboration with the Freedom Law Clinic and Manifesto. The resulting research paper will recommend ways of helping those affected by the legislation (http://freedomlawclinic.org/civil-liberties-in-the-lockdown).	Final report Civil Liberties during lockdown 1, which LJMU Law students worked on alongside students from 8 other universities and under the supervision of Freedom Law Clinic:
Christina Phillips	Part of the Government's Covid-19 expert database. Christina's expertise is data analytics and she's a member of the Projects, Operations and Workplace Management Research Group. She is also presenting at the British Academy of Management Webinar on Business Intelligence vs Business Analytics: How data-driven decision support can help during the Covid-19 crisis.	Ongoing activity
Elizabeth Heyworth-Thomas	With researchers at Birmingham University, working with The National Association for Areas of Outstanding Natural Beauty (NAAONB) and DEFRA looking at sustainable entrepreneurial ecosystems and C-19 recovery within AONB areas, nationally.	Seedcorn funded project
Jacqueline Douglas	Involved in a global collaborative research study into Industry 4.0 and OPEX methodologies, looking particularly at Quality 4.0. The research, led by Professor Jiju, includes a systematic literature review of Lean, Six Sigma and Agile literature that discusses Industry 4.0. Other academics from Italy, Brazil, USA, and India are also involved and it has the support from one of the Professors at the American Society for Quality.	Circulated the quantitative survey to Quality Professionals.
<u>Sue Cronshaw</u>	Online workouts in helping with well-being during lockdown. The study title is 'Web workouts and well-being: The role of physical-digital activity during the covid-19 lockdown'. My focus is not just the actual workout but the role that the online communities attached to the workout platforms play in making people feel connected and less isolated.	paper has now been accepted for publication in The Journal of Consumer Affairs.
<u>Patricia Jolliffe</u>	In April 2020 we conducted a survey into the impact of COVID19 on Roma. We are in the process of repeating this survey (March 2021) to see evaluate what is happening to Roma in respect of work and employment. We have been working with the Roma Community, Liverpool for four years to try and help make things better for the Roma community. Our aim is to use the findings of the survey to fight for better government and employer support for you, your friends and family in the UK.	Ouptut Lockdown April 2020 Survey: https://theconversation.com/coronavirus-shows-key-workers-need-better-pay-and-protection-heres-what-has-to-change-137037

Appendix 2: Crisis and Pandemic Interest group report



**Activity Report February 2021
Edition 2
(CPIG Founded April 2020)**

Liverpool John Moores University

Introduction

This is our second report since the group was founded in April 2020. Since then we have continued to progress on our variety of projects, made some substantial bids for funding, and welcomed a member of SAGE to speak at one of our meetings. As we move forward, our meetings will increasingly become more discursive in nature, and we will report on our progress as a paper exercise alongside that. I hope that those discussions will yield further fruit in terms of ideas for new projects. I am also pleased to see the broadening of the group to include more people outside of mainstream psychology. I have always been committed to cross-fertilisation and collaboration, and it has been an eye-opener to me to learn more about the talent and creativity to be found outside of my own discipline, and to be able to see ways in which we can all work together to say new things.

One of the greatest challenges we have faced is the nature of the pandemic and its rapidly shifting landscape. Just when we think something is worth studying, something changes, often advice from governments, and we are out of date before we start. Over time, we will be able to predict this better, and we will be able to lead the agenda more than follow it. Another challenge is the sheer number of researchers out there who have lent their hands to the pandemic, which have made the competition for funds, and for pages in journal issues, very tight. At the start of the pandemic, publishing on COVID was relatively easy as editors scrambled to drive their impact factors upward. Now they are being swamped with submissions about COVID.

Whilst these are challenges, they are also learning points for us. Some of the researchers on COVID out there in the world will be ephemeral and will settle back into their routine once this pandemic is defeated. If we can continue to shape ourselves around crisis in general, and how we can predict and ameliorate its effects, we will persist into the future as a recognised tactical unit, replete with enthusiasm and expertise.

Dr Mark Forshaw

Our Mission

To inform policy, behaviour, and the debate around pandemics and crises, from a psychosocial, evidence-based perspective.

Core Values

- Respect for good science and its methods.
- Clear communication.
- Efficiency, effectiveness, and swiftness in response to need.

Goals

- Working collaboratively to debate, design, and carry out quantitative and qualitative research into psychosocial aspects of pandemics and other crises, including terrorism, coups d'états, financial crashes and recessions, sudden poverty or ill health and natural disasters.
- High-impact publishing and dissemination of our work.
- Securing funding to achieve the best possible work is carried out, delivered and disseminated.

LJMU Members

Dr Mark Forshaw



Dr Mark Forshaw is a Registered, Practitioner Health Psychologist, Chartered Psychologist, Registered EuroPsy Psychologist, a Chartered Scientist and a Subject Leader in the School of Psychology. He is an acknowledged expert in training in health psychology, and a previous President of the Institute of Health Promotion and Education, previous editor of the International Journal of Health Promotion and Education, and the author of 12 books to date with three more to come in 2020/2021. He has 30 years of experience working and researching in the university sector. In recent years he has served as a Trustee of the British Psychological Society, as a Trustee of the Institution of Occupational Safety and Health and serves on the Board of BPS Communications Ltd and as a member of the Technical Advisory Board of MACAT. He is the Programme Leader of the Professional Doctorate in Health Psychology at LJMU, and an external examiner for the MSc Health Psychology at Manchester Metropolitan University and the MSc Clinical Applications of Psychology at Newman University.

P1: This study, led by Dr Mark Forshaw, and collaborating with Dr Victoria Blinkhorn, is looking at the development of a pandemic behaviours measure, and the relationship between that measure and other factors such as intolerance of uncertainty. **Progress:** currently in analysis.

P20: A collaborative study with Dr Mark Forshaw and Lucy Galvin investigating whether perception of leadership and communication style in managers impacts on the coping behaviours of employees during the Covid-19 pandemic. **Progress:** Ethics submission

Dr Victoria Blinkhorn



Dr Victoria Blinkhorn is a principal research consultant for the NHS and National Probation Service, and lecturer in Forensic Psychology at Liverpool John Moores University. Research interests include the understanding of criminal behaviour, personality disorders, mental illnesses, anti-social behaviour, criminal profiling, and offender management.

P2: Co-researcher: Dr Mark Forshaw

Title: Attitudes to the pandemic, tolerance of uncertainty, and personality (Dark Triad).

Progression: Data collection is complete and currently being coded for analysis.

Summary: Current Covid-19 research study aims to assess how and why individuals are behaving the way they are during the pandemic we are currently experiencing. Through the use of an online survey, participants were asked about their views, thoughts, and actions concerning COVID, along with other measures assessing tolerance of uncertainty, locus of control, and dark triad personality traits. Hopefully, this exploratory study will uncover how personality and individual differences relate to specific behaviours during the pandemic. Dark Triad of personalities was chosen as it is already well linked to selfish, risky, and anti-social behaviours (Blinkhorn et al, 2015; Blinkhorn et al, 2016), much of what we have already witnessed to date concerning the current pandemic. This study will allow for nuanced public messaging in future and prediction of stockpiling and anti-social behaviour in future crisis situations.

Other research ventures:

Awaiting funding to come through for a study exploring the impact of Covid-19 on experiences of probation officers.

Debi Rennie



Debi Rennie is a Trainee Health Psychologist at John Moores University and is currently working as a Senior Researcher at Cancer Research UK focussing on Health Behaviour research. Debi obtained a BSc in Psychology from the University of Leeds, an MSc in Health Psychology from UCL and is in her fourth year of the Professional Doctorate in Health Psychology from Liverpool John Moores University.

P3 Co-researcher: Dr Mark Forshaw

Title: The impact of COVID-19 enforced social isolation on students: A qualitative research study

Summary: Social distancing can lead to feelings of social isolation, and at times of global pandemic has been found to increase risk for long and short-term mental health problems (Brooks et al, 2020). In students, social isolation has been found to be associated with reduced life satisfaction, reduced psychological wellbeing (Bergin and Pakenham, 2014) and sleep disorders (Cho and Hwang, 2017). Students also experience negative impacts of social isolation with regards to their educational attainment (e.g. Ali and Smith, 2015). **Progress:** All interviews and analysis have now been conducted and the report is currently being drafted.

Lucy Galvin



Lucy Galvin is a Health Psychologist in Training at Liverpool John Moores University currently working in Children and Adolescent Mental Health Services and the Paediatric Psychosocial Service in Central Manchester. Lucy works with young person with mental health conditions, and/or long-term health conditions, namely endocrine, urological and renal conditions. Lucy has previously worked as a Research Assistant in the Christie Patient Centred Research Centre. Lucy completed her BSc in Psychology at the University of Leeds, and MSc in Health Psychology at LJMU.

P4 Co-researchers: Dr Mark Forshaw and Dr Helen Poole

Title: The role of illness perceptions in engagement of health protective factors and coping strategies linked to Covid-19 “Coronavirus” in the United Kingdom. **Progression:** Completed data collection and conducting analysis.

Summary: In light of the Covid-19 pandemic and the government guidance on engagement in certain behaviours to reduce transmission, this study seeks to investigate perceptions of Covid-19 within a theoretical context to explore whether these can play a part in uptake. As such, this study aims to utilise the Self-Regulatory Model of Illness Behaviour (Leventhal et al., 1980) as a framework of investigation. The aims of the study are to investigate anxiety, knowledge, illness perception, coping strategies, perceived risk of COVID-19 and engagement in health protective behaviours in an adult sample in the United Kingdom. An increased understanding can support understanding, and adjustment to current approaches, as well as informing for future pandemics.

P9 Co-researchers: Dr Mark Forshaw and Dr Helen Poole

Title: Investigating the role of attitudes, social influences and confidence in current and future participation of health protective behaviours associated with Covid-19. **Progression:** Data collection for part two.

Summary: This study will draw on the attitudes towards the protective health behaviours (hand washing and social distancing), public health messages, and the Government approach. The study will draw on perceived risk, social acceptability and subjective norm, perceived behavioural control, self- and response- efficacy, knowledge and cues to action in current engagement of behaviours, and to observe which factors are effective in predicting actual behaviour in three months’ time (Time 2).

Lauren Turnbull



Lauren Turnbull is a Trainee Health Psychologist at Liverpool John Moores University currently working as a Wellbeing Practitioner in the Occupational Health Department at East Lancashire Teaching Hospitals National Health Service Trust. Lauren has obtained a BSc honours in Psychology, MSc in Health Psychology and is currently completing the Professional Doctorate in Health Psychology at Liverpool John Moores University. Lauren is also a member of The British Psychological Society.

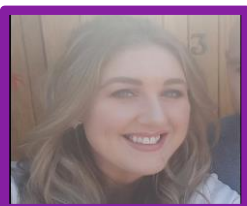
P17: Co-researchers: Dr Mark Forshaw

Title: Exploring the lived experiences of NHS employees who are shielding during the COVID-19 Pandemic: A Qualitative Analysis

Progress: Currently on hold

Summary: Infectious disease pandemics are a rising threat in our globalising world (World health organisation (WHO), 2020; Miller, 2007; Dingwall et al. 2013; Doherty, 2013; The Lancet, 2015; Williams, 2012). Given the highly contagious nature of COVID-19, governments and public health systems have adopted measures to prevent the risk of contagion of the outbreak including self-isolation, endorsing protective health behaviours and ceasing social gatherings and international travel. In the United Kingdom, the government alongside specialist medical professionals, identified individuals who were clinically extremely vulnerable, based on specific medical conditions such as chronic respiratory diseases, to protect and shielding during the COVID-19 pandemic. The protecting and shielding letters state *“You’re strongly advised to stay at home at all times and avoid any face-to-face contact if you’re clinically extremely vulnerable to protect yourself.”* (Public Health England, 2020). Furthermore, limiting access to normal daily activities, work routines and normal social interactions, which can have a profound impact upon an individual’s physical and psychological health, especially in individuals who have to take measures to maintain good health and well-being due to their chronic and complex condition (NHS, 2020). A substantial amount of literature using quantitative research has yielded an understanding of the physical and psychological effects of individuals who are self-isolating during an infectious disease pandemic (Brooks et al. 2020; Brendon et al. 2004; Cava et al. 2005; Desclaux et al. 2017; Wilken et al. 2017; Johel et al. 2009; Robertson et al. 2004; Jeong et al. 2016). Studies have identified longer durations of self-isolation are associated with long term deterioration in physical and psychological health and well-being including avoidance behaviours and traumatic stress (Hawryluck et al. 2004; Reynolds et al. 2008; Marjanovic, Greenglass & Coffey, 2007; Ventatesh & Edirappuli, 2020). Limited evidence has focused qualitatively on the perceptions of Health care workers, who have been in self-isolation. This particular population may experience stress including causing their workplace to be understaffed, being separated from their working environment and colleagues and feeling they have increased work pressure and workload during the COVID-19 pandemic, thus, these factors can have a significant impact on one’s physical and psychological health and well-being (Brooks et al. 2020). It is essential this population feels supported during their isolation period and during the recovery stages of the pandemic when they are returning to their working environments. Therefore, it is important to explore their lived experiences, thoughts and feelings regarding the psychological impacts, coping and adjustment strategies and the organisational support which will be protective factors to ensure they return to work safely.

Dr Kathryn Bould



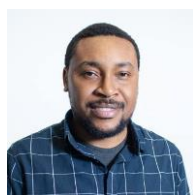
Dr Kathryn Bould is a lecturer in psychology at Liverpool John Moores University and a Trainee Health Psychologist. She gained her PhD in Health Psychology from King's College London in 2017. Her research interests include long-term condition management, infant feeding, behaviour change, and applied health psychology, particularly in relation to dentistry.

P5 Co-researchers: Dr Mark Forshaw Title: Readability of Online COVID-19 health information and advice

Progress: Research paper: Readability of Online COVID-19 health information and advice. Exploring papers to submit to.

Summary: Health information is only effective if it is understood by its audience. Readability is a systematic measure of ease with which written information can be read and understood. Readability can affect the reader's ability to access, comprehend, and utilize health information. This is no less important when the online information pertains to public health crises, such as the COVID-19 pandemic. This study was conducted to assess the readability of available online COVID-19 information readily available to the public to engage with. At a time when organisations and institutions were rapidly providing advice and reacting to a developing pandemic, it was hypothesised that some of that haste would be associated with a lack of clarity, as measured by readability indices. Websites containing information relating to Covid-19 were accessed and assessed for inclusion in the study. The readability scores for each section of information were determined using Readable.com, which is a Medline-recommended service (National Institutes of Health, 2017). The service generates commonly recommended readability tests such as Flesch-Kincaid Grade Level (FKGL), Gunning Fog Index (GFI), Coleman-Liau Index (CLI), the Simple Measure of Gobbledygook (SMOG) Grade Level, and Flesch-Kincaid Reading Ease (FRE). Based on the scores from these scales, the readability of the information sources was determined. Readability scores using eight readability indices were calculated for each source (n=65) and scores varied between individual sources of COVID-19 information. Our results demonstrate that, despite the recommendation that information be presented to the general public at a sixth grade reading level (McKenzie, Neiger & Thackeray, 2016) most of the websites we assessed addressing COVID-19 information and advice presented content that was at greater than the recommended reading level based on the readability indices used. Based on these results, a significant amount of information available on the Internet about Covid-19 will not be easily readable for many individuals attempting to use the Internet to help inform their decisions about their health and behaviour.

Dr Alex Akinbi



Dr Alex Akinbi is a Lecturer in Computer Forensics and Cyber Security at Liverpool John Moores University. He has served for several years in academic positions and worked with leading industry players in Cyber Security. He has long history of working in different areas of digital forensics and security as a researcher, ethical hacker, security consultant and professional trainer. Currently working on the challenges, potential and efficacy of digital contact tracing apps in the fight against COVID-19.

P7 Co-researchers: Dr Mark Forshaw and Dr Victoria Blinkhorn

Title: Attitudes to introduction of a contact tracing app during the 2020 Covid-19 outbreak

Progress: Research paper co-authored with Drs Mark Forshaw and Victoria Blinkhorn currently under review for consideration

P10 Title: Critical Review: Contact tracing apps for COVID-19: Challenges and potential

Progress: Preprint available here: <https://osf.io/6xbsc/>

Dr Rachel Tarling



Dr Rachel Tarling is a Senior Lecturer in Health Psychology at Liverpool John Moores University, and a Registered Health Psychologist and Chartered Psychologist. Rachel's research interests include the psychological consequences of cancer, screening, and investigative processes. In particular barriers to attendance and promotion of early presentation with symptoms through: risk information; presentation and health promotion materials; application of models and theory; interventions to improve attendance/early presentation; fear, anxiety and coping through the investigative and screening processes; individual differences and inequalities in access to screening. Particular interest in the impact of the pandemic on these issues and the psychological/physical long-term consequences.

Current COVID-19 research:

DisCoVer project: This project aims to elucidate the consequences of SARS-CoV-2 exposure in susceptible cancer patients for risk stratification. Nested within the DisCoVer project is a cross-sectional survey of psychological and behavioural measures, this research is led by Dr Rachel Tarling and Dr Helen Poole at LJMU. The project aims to gain a better understanding of the impact of the pandemic for cancer patients attending hospital for essential cancer care/treatments. Collaborating with The Clatterbridge Cancer Centre and Christie Hospital.

Long Term Conditions and Covid-19: Mixed methods project examining barriers and facilitators to accessing health and social care services. To examine the psychological consequences of the lockdown, the impact of social isolation and altered access to routine resources. The aim of this project is to understand the impact of the pandemic on those who are managing long term conditions to help formulate recommendations for future management, particularly considering the imposition of further lockdowns and outbreaks. Dr Mark Forshaw and Dr Rachel Tarling LJMU, in collaboration with Dr Judith Eberhardt (Teesside University), Dr Stephanie Kiliņç (Teesside University) and Prof. Jonathan Ling (University of Sunderland).

P6 Experiences of people with physical disabilities under lockdown conditions during the COVID-19 Outbreak in the UK: Qualitative interviews with people who have a physical disability to investigate their experiences during the pandemic. Dr Mark Forshaw, Dr Rachel Tarling, Dr Victoria Blinkhorn
Experiences of parents of children with physical disabilities under lockdown conditions during the COVID-19 Outbreak in the UK. Currently seeking funding Dr Mark Forshaw, Dr Rachel Tarling, Dr Victoria Blinkhorn.

Sara Dewhurst



Sara Dewhurst is a 3rd Year Health Psychologist in Training at Liverpool John Moores University. Sara works in an eating disorders service within a psychiatric hospital. Research interests include stress management, behaviour change for weight management, mindfulness, barriers to exercise, physical activity prescription, workplace wellbeing and mental health awareness at work.

Kate Atherton



Kate Atherton is a second year Trainee Health Psychologist at Liverpool John Moores University and is currently working at Damibu Ltd, a Liverpool based digital design studio providing technology to support public health projects amongst other sectors. Kate supports co-creation, engagement and business development and is the Product Owner for CATCH, an innovative health information app aimed at parents and carers of children under five. Kate completed her BSc in Psychology and Forensic Science and MSc in Health Psychology at LJMU.

P13 Co-researchers: Dr Mark Forshaw and Dr Tara Kidd

Title: Exploring a recalibration in the perception of severity of symptoms following introduction of UK lockdown measures and impact on utilisation of healthcare services. **Progress:** Nearing the end of data analysis

Summary: Past research has found that avoidance behaviours towards attending healthcare facilities during a pandemic are associated with worry and perceived high severity and susceptibility of catching a virus. However, minimal UK based research exists in relation to the COVID-19 pandemic in this regard. It's therefore important to understand through what mechanisms UK lockdown and the COVID-19 pandemic impacts upon presentation to healthcare facilities, particularly with symptoms not associated with the virus. This study seeks to explore how lockdown measures and the presence of COVID-19 affect health anxiety associated with non-COVID related symptoms. Additionally, it looks at how lockdown measures and the presence of COVID-19 affect healthcare use for non-COVID related symptoms

P14 Co-researchers: Dr Mark Forshaw and Dr Tara Kidd

Title: Exploring how UK COVID-related lockdown measures' impact on community team sports has impacted physical activity levels and mental wellbeing in women. – A mixed methods analysis.

Summary: As lockdown caused game play of team sports to grind to a halt, it's important to understand if this has impacted on mental wellbeing and physical activity maintenance for those women who do choose team sports to stay active. It would also be pertinent to investigate the reasons for participation in sport and any continued physical activity to understand the underlying mechanisms behind their choice to engage and if this protects long term maintenance of physical activity. This would indicate whether the continued promotion of women's team sport would hold value in the future. This study aims to explore how UK lockdown measures have impacted women's engagement in team sports, whether this has affected physical activity levels and why, and whether any changes in team sports participation/ physical activity have affected mental wellbeing. **Progress:** Data analysis

Rachel Stalker



Rachel read Jurisprudence at Christ Church, Oxford, and obtained her LPC at the Oxford Institute of Legal Practice. She completed her training contract at Linklaters, including six months working pro bono for human rights charity Liberty. Rachel qualified as a Solicitor in 2005 and spent seven years as a litigator in private practice in Liverpool and Manchester, before joining Liverpool John Moores University's School of Law as a Senior Lecturer in February 2013. As well as teaching on the LLB and postgraduate programmes, Rachel coordinates the School's pro bono activities. She established the School of Law's award-winning Legal Advice Centre in April 2014 and is Clinical Legal Education Programme Leader.

Dr Samantha Brooks: is a Chartered member of the British Psychological Society, and is currently a Lecturer in Cognitive Neuroscience. She specialises in the neural mechanisms of impulse and appetite control in various psychiatric conditions (e.g. addiction, eating disorders).



P16 Co researcher: Dr Benjamin Gibson: Three types of COVID lockdown response: Links to neural processes of affect regulation

This project aims to progress the findings of a recent poll by The Policy Institute, King's College, London (Duffy & Allington, 2020), whereby a cluster analysis identified three levels of conformity response to the COVID-19 lockdown, in 2,250 UK residents aged 18-75 years. Conformity responses were: acceptance (48%), suffering (44%) and resistance (9%). Acceptance reflects internalisation conformity (Asch, 1951), where people adhere with ease to group/society norms with low cognitive load on memory/low mental effort; suffering reflects compliance conformity (Asch, 1951), where people adhere less strongly to norms, with a greater burden/conflict on their cognitive load. Resistance, on the other hand, is a Freudian psychoanalytic concept (Strachey, 1999) - the lowest level of conformity in this instance. Resistance refers to an individual's unconscious emotional response, usually negative, (e.g. ego defences against unfulfilled wishes) to an external source (e.g. COVID rules rapidly imposed by the government at the expense of individual freedoms), which may impede psychological health. Levels of psychological resistance are difficult to measure, given that they are largely unconscious (Strachey, 1999). However, analysis of dream transcripts (a psychoanalytic technique) regarding dreams experienced during the COVID-19 lockdown period can help to uncover such unconscious processes and can highlight underlying emotional themes. In fact, since the global COVID lockdown, recent neuroscientific research across the world have been conducting dream research, reporting at least a 35% rise in vivid, reportable dreams during this period ('The pandemic is giving people vivid, unusual dreams, here's why:' The National Geographic: Science, April 2020). In addition, self-report measures of working memory, self-regulation and rumination can be linked to varying levels of cognitive flexibility, especially in relation to healthy sleep practices (Todd and Mullen, 2012). The main aim of this project is to ask people around the world, of any gender, between the ages of 18-75 years to take part in some tasks that will help us to determine some cognitive-emotional processes underlying the recently recognised psychological responses to the COVID-19 lockdown. This data will progress knowledge that will help in future to develop interventions that may improve psychological health during and after lockdown. For example, understanding some of the unconscious emotional themes (from dream transcripts) in response to the lockdown, and how they link to cognitive functioning (from cognitive tests and questionnaires), can help to develop COVID-specific cognitive reappraisal and remediation therapies, to aid psychological readjustment and better mental health in this new era, and in preparation for potential additional waves of the pandemic in future.

Dr Samantha Brooks is also supporting several other projects, some of which are utilising the datasets of the above study. They are as follows:

- Age + gender differences in response to COVID lockdown - Dr Ben Gibson (Liverpool)
- Variance in working memory capacity, self-regulation and differential responses to the COVID lockdown Amelia Dahlén (Uppsala)
- Obsessive-compulsive behaviours in response to the COVID lockdown - Sylvia van Belle (Uppsala/Cape Town)
- Variance in substance use (alcohol, nicotine, prescribed medications) in response to the COVID lockdown - Evangelos Zois)
- Primacy and recency memory effects during a free recall task, in those who have had covid and those who have not. Davide Bruno (Liverpool) & Dr Deborah Talamonti (Canada)
- Executive functioning during the COVID lockdown: abstract versus concrete and emotional versus neutral word recall - Sahba Besharati
- Cognitive emotion interaction in dream recollections: the role of working memory capacity and self-regulation during the covid lockdown - Sahba Besharati (Johannesburg)

Dr Helena Gosling



Dr Helena Gosling is a Senior Lecturer in Criminal Justice and programme lead for the MA Criminal Justice and MA International Criminal Justice at Liverpool John Moores University. To date, Helena has worked at LJMU for more than 10 years occupying a variety of roles and responsibilities across both Criminology and Criminal Justice programmes. Prior to becoming an academic, she worked in the drug rehabilitation sector across community, residential and custodial settings. Helena's main research interests are situated in the design, delivery and commissioning of innovation and alternative practice within the criminal justice system and drug treatment sector.

Info about the project: The alcohol and drug treatment sector is an essential and highly valued element of our national response to the risk presented by COVID-19 (HM Government, 2020). Providing services for those who are at increased risk of becoming infected and/or infecting others (Matthews, 2019). Residential alcohol and drug treatment services, many of which are registered care homes, are a crucial component of the fight against Coronavirus (Ward, 2020). Heralded the UKs COVID-19 frontline (Booth, 2020) working alongside the most vulnerable and complex people in society, whilst simultaneously grappling with an ageing treatment population (PHE, 2018). A strategic priority of the World Health Organisation is to reduce mortality through appropriate care (WHO, 2020). Exploring how residential services adapt in a pandemic context is of significance given that COVID-19 is yet to peak in the social care sector (Humphries, 2020). Over a twelve month period (from June 2020-June 2021), the research will explore how staff and service users, across residential services in the UK, redefine and re-establish core treatment priorities whilst grappling with efforts to reduce harm and protect people from COVID-19. The project will be based within four residential services (including a specialist family service for women and their children) and the findings will be disseminated as best practice guidelines to inform policy and practice across residential services throughout the UK to enhance the sectors ability to build a more sustainable treatment landscape moving forwards. If you would like any further information about the project, please do not hesitate to contact me via email: H.J.Gosling@ljmu.ac.uk

Dr Foteini Stavropoulou

Dr Foteini Stavropoulou is a Senior Lecturer in Operations and Supply Chain Management at Liverpool Business School and a Research Fellow at the Management Science Laboratory at Athens University of Economics and Business, Greece. Her main research area is in Operational Research and Logistics. Her main research interests consist in modelling problems of high-complexity that arise in the areas of logistics and distribution and developing efficient and effective algorithms or systems for their solution. Her recent work, relating to the pandemic, focuses on healthcare supply chains, specifically the distribution of vaccines during an epidemic/pandemic and medical supply chains in developing countries.

Dr Laura Boulton



Dr Laura Boulton is a Senior Lecturer at the Liverpool Centre for Advanced Policing Studies. Previously she was a Senior Lecturer in Policing at the University of Central Lancashire and was seconded to Lancashire Constabulary for as their Academic Lead for the Evidenced Based Research Hub. Providing an evidence base that can be practically utilised by Police practitioners to impact change in practice was the underlying motivation for her research. She has published a range of journal articles with a focus on policing and decision making along with research into serious and organised crime, missing from home and prevention. Laura completed her Psychology PhD in 2014 at the University of Liverpool. Under the supervision of Professor Jon Cole, her thesis examined how cognition, executive functioning, expertise, and human factors influence the decision making of Authorised Firearms Officers during armed confrontations.

PI: Dr Laura Boulton **Co-researchers:** Dominique Walker and Dr Michelle McManus

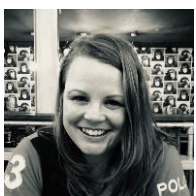
Title: Policing a pandemic: An exploration of police use of powers during COVID-19, dis-proportionality, and the impact on public perceptions of police legitimacy.

Progression: Currently collecting data **Funder:** The British Academy

Summary: Traditional UK policing relies on Peelian principles of policing by consent in which public views of police legitimacy is based on transparency about their powers, integrity in exercising powers and accountability for doing so. This research seeks to explore the impact of the Coronavirus Act 2020 on public perceptions towards the police and examine their use of powers. This project seeks to explore these issues within the force area of Merseyside specifically, but hopes to serve as a catalyst for further examination of these trends nationwide and internationally. A mixed methods approach will be taken via studies: (i) an online survey exploring public perceptions of The Coronavirus Act 2020 police use of powers, (ii) an online survey examining frontline police officer experiences of the implementation of these powers, and (iii) an analysis of the COVID related arrests/use of COVID related powers in Merseyside.

Dr Liz Heyworth-Thomas

Liz joined Liverpool Business School in March 2020. Her research is interdisciplinary, and cross-sector. With a PhD in Sociology and Social Policy from Bangor University, and knowledge and experience in the business field, Liz is working on a number of collaborative projects which seek to improve wellbeing and quality of life perspectives for hard to reach communities through business initiatives and entrepreneurial ecosystem development. An outline of her research projects are outlined below:



Current Projects:

Principle Investigator: The Impact of Covid-19 on Business Owner Wellbeing (in collaboration with a number of LA Business Support Networks)

Co-Investigator: Being enterprising in Beautiful Landscapes: Investigation of the Challenges in Rural Businesses' (Seedcorn funded project)

Principle Investigator: Dr Rosalind Jones, University of Birmingham. Co-Investigators: Dr Inci Toral, University of Birmingham, Dr Richard Edwards, independent.

Collaboration: National Association for Areas of Outstanding Natural Beauty

Bids in progress:

Title: Supporting Social Enterprise in the context of Stroke Support

Title: Wellbeing in BME Communities

Dr Anne-Marie Bartlett



Dr Anne-Marie Bartlett is a Lecturer in Graphic Design and Illustration at the Liverpool School of Art and Design. She has over 18 years' experience in the creative industries as practitioner, educator, and researcher. Her Graphic Design and Illustration portfolio includes collaborations and works for clients ranging from the National Army Museum, London, to the Arctic Monkeys. Through her PhD, she investigated the role of design in the facilitation of meaningful play between disabled and non-disabled children - an interdisciplinary collaboration between Sociology and Mechanical Engineering at the Centre for Disability Studies, University of Leeds. Her recent research at Sheffield Hallam University looked at the role of design in Evidence Based Transformation within the NHS, examining knowledge dissemination within, and between, elderly patient medical wards across South Yorkshire.

Research interests/research relevant to CPIG:

Dr Bartlett's research interests include participatory research, methods of co-creation, and inclusive design. Her work focuses on voice, inclusion, and the potential for Graphic Design to bring about social change. Her current Covid-19-related research interests focus on the uneven impacts of the pandemic and the role of co-design/co-creation in projects designed to give voice to marginalised or underrepresented groups.

Title: Tackling Digital Exclusion: Lessons Learned from the Experiences of Vulnerable and Disadvantaged University Students During the Covid-19 Pandemic.

Status: Currently seeking funding and under research council review.

LJMU Collaborators: Dr Anne-Marie Bartlett, Ester Ragonese, Dr Phil Carey and Phil Rothwell

Dr Sarah Schiffling



Sarah Schiffling is a Senior Lecturer in Supply Chain Management at Liverpool John Moores University, UK, and an International Research Fellow with the HUMLOG Institute in Helsinki, Finland. She previously worked as Lecturer in Logistics and Operations Management at the University of Lincoln, UK. She obtained a PhD in Humanitarian Logistics from Heriot-Watt University, UK.

Sarah's research interests include pharmaceutical supply chains, disaster relief operations, and supply chain management in developing nations. Her current projects focus on vaccine supply chains, logistics in conflict areas, commercial-humanitarian interactions, and project management. Sarah speaks fluent German. She recently completed secondments with companies in Germany and Switzerland as part of an EU-funded Horizon2020 project.

Sarah frequently delivers guest lectures on humanitarian logistics and pharmaceutical supply chains in the UK and abroad. In 2020, she published papers in the International Journal of Operations & Production Management, Annals of Operations Research, and the International Journal of Production Research.

The Conversation

Schiffling S, Breen L. 2021. **COVID vaccine supply is causing an EU crisis – so what's being done to speed up production?**

Schiffling S, Breen L. 2021. **COVID vaccine: some waste is normal – but here's how it is being kept to a minimum**

Schiffling S, Breen L. 2020. **COVID vaccines are starting to arrive – here's how everyone will get them**

Breen L, Schiffling S. 2020. **Vaccines are here, but how will we get them to billions of people?**

External Members

Dr Jekaterina Schneider



Dr Jekaterina Schneider is a research specialising in body image and exercise psychology and is currently working as a Research Fellow at the Centre of Appearance Research at the University of the West of England, Bristol. She has an MSc in Psychology from Loughborough University and a PhD in Exercise Psychology from Liverpool John Moores University. Until recently, she was working as a Postdoctoral Research at the University of Jyväskylä in Finland. Her research interests include exercise psychology, body image, and eating disorders, as well as the promotion of diversity and inclusivity in research.

P8 Co-researchers Dr Benjamin Gibson, Dr Deborah Talamonti & Dr Mark Forshaw

Review 1: Factors mediating the psychological well-being of healthcare workers responding to global pandemics: A systematic review

Progress: Currently under review in the *Journal of Health Psychology* (available as a preprint: <https://doi.org/10.31234/osf.io/c23tx>)

Summary: This review investigated the mental health outcomes of healthcare workers responding to global pandemics and identified mediators of psychological well-being. A total of 39 studies were included in the systematic review and results showed that worse well-being outcomes, such as stress, depressive symptoms, anxiety, and burnout were related to demographic characteristics, direct contact with infected patients, and poor perceived support. In turn, self-efficacy, coping ability, altruism, and support from employers and organisations were found to be protective factors. Despite limitations in the quality of available evidence, this review highlights the prevalence of poor mental health outcomes in healthcare workers responding to global pandemics and identifies possible targets for future intervention.

P15 Co-researchers Dr Benjamin Gibson, Dr Deborah Talamonti & Dr Mark Forshaw

Review 2: The impact of inequality on mental health outcomes during the COVID-19 pandemic: A systematic review

Progress: Accepted and in production with *Canadian Psychology*.

Summary: Several factors of inequality have been identified, including socioeconomic status, population group, sex and gender, and place of residence. Such factors have a big impact on underlying health inequalities in society, which may be exacerbated by the current COVID-19 outbreak. However, less is currently known about how inequality factors affect the mental health of disadvantaged populations. Therefore, the aim of the current review was to explore inequality factors that impact the mental health of various population groups during the ongoing COVID-19 outbreak, and to identify protective and risk factors that can be targeted in future interventions to reduce the impact of COVID-19 on short-term and long-term psychological well-being

Dr Deborah Talamonti



Dr Deborah Talamonti is a researcher specialised in ageing and neurodegeneration. She has an M.S. in Neuroscience and Neuropsychological Rehabilitation from Italy and a PhD in Psychology from Liverpool John Moores University. She is currently a postdoctoral trainee in neuropsychology at the Montreal Heart Institute (Canada). Her research interests are memory, ageing, brain imaging and neuromodulation (fNIRS, EEG, tDCS), dementia prevention, physical health, cardiovascular diseases, and risk factors.

P8 Co-researchers Dr Benjamin Gibson, Dr Jekaterina Schneider & Dr Mark Forshaw

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Dr Benjamin Gibson



Dr Benjamin Gibson is a multi-methods researcher specialising in intervention development and long-term conditions. He has both a MSc and a PhD in Health Psychology from Liverpool John Moores University. His research interests include behaviour change, motivation, stigma, anxiety and depression, health-literacy, and all things positive psychology.

P8 Co-researchers Dr Deborah Talamonti Dr Jekaterina Schneider & Dr Mark Forshaw

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Summary: Several factors of inequality have been identified, including socioeconomic status, population group, sex and gender, and place of residence. Such factors have a big impact on underlying health inequalities in society, which may be exacerbated by the current COVID-19 outbreak. However, less is currently known about how inequality factors affect the mental health of disadvantaged populations. Therefore, the aim of the current review was to explore inequality factors that impact the mental health of various population groups during the ongoing COVID-19 outbreak, and to identify protective and risk factors that can be targeted in future interventions to reduce the impact of COVID-19 on short-term and long-term psychological well-being.

Charlotte Baugh

Charlotte is a PhD Student at the University of Liverpool, researching into the use of social media in health research, prior to and during the COVID-19 pandemic. She completed both BSc in Applied Psychology and a MSc in Health Psychology at Liverpool John Moores University. Following graduation, Charlotte worked at the Research and Innovation Department at The Clatterbridge Cancer Centre for over 2 years, where she was predominately responsible for managing and coordinating a variety of non-interventional, qualitative, observational and translational studies.

Current research: Evaluating engagement and use of SOcial mediA for research before and during the COVID-19 pandEmic: The SOLACE Study

Summary: With the increasing use of social media and the response the COVID-19 pandemic has received, there is a need to understand the role social media has played and how we can improve this for future research. Through qualitative methods of interviews and focus groups, this research aims to evaluate the engagement and usage of social media in research settings (such as clinical trials/community health studies), prior to and during the COVID-19 pandemic, in order to produce evidence based guidelines to inform future use of social media platforms for health research purposes. **Progress:** Data Collection.

Dr Judith Eberhardt



Dr Judith Eberhardt is a Senior Lecturer in Psychology at Teesside University, and a Chartered Psychologist. Judith holds a PhD and an MSc in Health Psychology. Judith's research interests include the psychosocial factors in the development of breast cancer, male hormonal contraception, digital and web-based interventions, binge drinking, and long-term conditions. Judith has a particular interest in the impact of the pandemic on long-term conditions and on preventative healthcare, such as cancer screening.

Current COVID-19 research:

1. COVID-19 Vaccine Acceptance in BAME Individuals in the North East of England. The study will assess the acceptance of COVID-19 vaccination among BAME individuals in the region and attempt to uncover predictors of the acceptance of the vaccine in this group, using a survey design. We will produce recommendations on how to improve the uptake of the vaccine among BAME individuals, based on our findings. Grant proposal to the NIHR Clinical Research Network North East and North Cumbria. PI: Dr Judith Eberhardt (Teesside University). Col: Prof Jonathan Ling (University of Sunderland).
2. Cervical Screening in BAME Women in the United Kingdom in the Wake of the COVID-19 Pandemic: Psychosocial Factors, Barriers and Facilitators. We aim to explore the psychosocial factors that may impact on BAME women's likelihood to access cervical screening in the wake of the pandemic and design an intervention to increase uptake, based on our findings. Grant proposal to the ESRC. PI: Dr Judith Eberhardt (Teesside University). Cols: Prof Jonathan Ling and Dr Floor Christie (University of Sunderland).

Dr Stephanie Kılınc



Dr Stephanie Kılınc is a Senior Lecturer in Psychology at Teesside University, Registered Practitioner Psychologist and Chartered Psychologist. Her research and her work in practice focus on people with long-term conditions, specifically neurological conditions, and she has been a Trustee for the Tees Valley, Durham and North Yorkshire Neurological Alliance for fifteen years. Stephanie has co-produced a self-management tool for people with long-term conditions and is currently developing this into a self-management programme. She is particularly interested in examining the impact of the pandemic on the lived experience, self-management and health and social care support needs of people with long-term conditions. Her other research interests include co-production and participatory approaches, lived experience research and creativity and well-being.

Current COVID-19 research:

Self-Managing a Long-Term Condition in the Wake of the COVID-19 Pandemic: Psychosocial Factors, Barriers and Facilitators. Mixed methods project examining barriers and facilitators to accessing health and social care services. To examine the psychological consequences of the lockdown, the impact of social isolation and altered access to routine resources. The aim of this project is to understand the impact of the pandemic on those who are managing long term conditions to help formulate recommendations for future management, particularly considering the imposition of further lockdowns and outbreaks. Collaboration with Dr Judith Eberhardt (Teesside University), Dr Stephanie Kılınc (Teesside University) Dr Mark Forshaw, Dr Rachel Tarling, and Prof. Jonathan Ling (University of Sunderland).

Professor Jonathan Ling



Jonathan Ling is Professor of Public Health in the Faculty of Health Sciences and Wellbeing at the University of Sunderland. A Fellow of the Royal Society of Public Health and a Chartered Psychologist for many years, Jonathan has interests across the breadth of public health and health sciences. He has been awarded national funding from the MRC, ESRC and Public Health England, as well as the NHS and charities. Jonathan is Associate Director of Fuse, the NIHR-funded Centre for Translational Research in Public Health, a member of the NIHR's Research for Patient Benefit regional funding committee and has been a member of the nationally-recognised NETSCC College of Experts, Health Technology Assessment (HTA) Psychological and Community Therapies Panel. Jonathan holds a permanent honorary academic contract with Public Health England and in 2020 was part of the College of Experts for the NIHR COVID Recovery and Learning Research Call.

COVID activity:

- College of Experts for the NIHR COVID Recovery and Learning Research Call 2020
- Mooney, J & Ling, J. (2020). Long Covid: A potential longer term morbidity time bomb? *BMJ* 2020;371:m4470. doi.org/10.1136/bmj.m4470.
- Sevinc M, Hasbal NB, Sakaci T, Basturk T, Ahbap E, Ortaboz M, Mazi EE, Pirdogan E, Ling J, Unsal A. (2021). Frequency of depressive symptoms in Syrian refugees and Turkish maintenance hemodialysis patients during COVID-19 pandemic. *PLoS ONE* 16(1): e0244347.
- Ikhmais B, Hammad AM, Qirim W, Abusara OH. & Ling J. (in press). Conducting COVID-19-related research in Jordan: Are we ready? *Disaster Medicine and Public Health Preparedness*. 21, 1-25 doi.org/10.1017/dmp.2020.437

Dr Anthi Loutsiou



Dr. Anthi Loutsiou is Director of Clinical Training in the Department of Psychology at the University of Cyprus, Registered Clinical Psychologist in Cyprus (active) and Colorado/USA (Inactive), and EuroPsy Certified Psychologist. She is an accomplished trainer and a pioneer in the training of psychologists in Cyprus. Anthi co-founded the PhD program in Clinical Psychology and the Master's Program in School Psychology (MPSP) in her department. In Cyprus, she designed and launched the first psychology field placement arrangements for undergraduates (in collaboration with the community/industry) as well as practical training arrangements for school psychologists (according to statutory regulations and best training practices) which became benchmarks for other psychology programs. Anthi has more than 20 years of teaching and advising experience as an instructor in academia. She has mentored more than 120 school psychologists and facilitated the field placement of more than 800 undergraduate psychology students. She was Program Co-Leader of the School Psychology Masters at the University of Cyprus for 15 years, is the lead internal examiner for the final professional competency exam in School Psychology, and an internal examiner for the comprehensive exam for PhD candidates in Clinical Psychology. As a principle or collaborating investigator, Anthi has received more than a million euro in total funding over the years for applied research and infrastructure. She is a co-founding member of the Centre of Applied Neuro Sciences at the University of Cyprus where she developed with her research team an innovative behavioral technology to maximize effective parenting skills with younger children which has been tested through clinical trials with 400+ parents.

Interests Regarding Crisis- Anthi's professional interest in crisis response at the community level falls within a Sustainable Development Goals framework. She is particularly interested in research and other professional synergies for funding and networking opportunities to support (1) the wellbeing of workers and first responders during crises and (2) build capacity within schools and communities for evidence driven psychosocial response to crises.

Recent activities relative to the COVID-19 pandemic and other crises

A. Scientific Event Organizing (1) "Interactive Webinar Series: School Psychologists across Europe share responses to the COVID- 19 Pandemic" Spring 2020), (2) "Nicosia e-Symposium on Disaster, Crisis and Trauma" (October 2021), (3) Hot Topic "Responding to the Psychosocial Challenges of the Pandemic" as part of ISPA 2021 Cyprus -42nd Annual Conference of the International School Psychology Association

B. Media Involvement (1) COVID-19 Psychosocial Impact on Children, Youth and Families with young children (January 2021 – newspaper interview), (2) COVID-19 Psychosocial Impact of Telework (January 2021-TV news channel interview).

C. Professional Service: (1) Appointed Ad hoc member to the CoVID-19 Advisory Committee to the Minister of Health in Cyprus on Psychosocial Issues (As of January 2021) (2) Appointed national member to the Standing Committee on Disaster, Crisis, and Trauma of the European Federation of Psychologists Association.

D. Training /Clinical Consultation Regarding Critical Incidents at the Workplace– (1) External Lecturer at the Cyprus Police Academy (2) Scientific Associate at the Cyprus Fire Service, (3) Clinical consultant to organizations in the private and semi-governmental sector.

Associated Funding

Hope, V, Saini, P, Sumnall, H, Timpson, H, Brett, C, Forshaw, M, Quigg, Z, Hay, G, Gee, I, Leavey, C & Porcellato L. The PHOENIX Project: A survey of People and Households' Ongoing Efforts in Response to the National COVID-19 Guidance and its Impacts Across the North West, LJMU Covid-19 Rapid Response Funds. £10,461.

Social Media

To support with recruitment of participants, we currently utilise a twitter account @pandemicsurveys which can be viewed here:

<https://twitter.com/pandemicsurveys>

Recent Media Appearances

Dr Mark Forshaw

BBC Radio Merseyside (17th March 2020, 18th March 2020, 23rd March 2020, 31st March 2020, 14th April 2020, 17th April 2020, 27th April 2020, 5th May 2020, 11th May 2020, 15th May 2020, 26th May 2020, 15th June 2020, 3rd July 2020, 14th September 2020, 22nd September 2020)

BBC Radio Scotland (1st May 2020)

BBC Radio Wales (16th May 2020)

Radio City Talk (28th March 2020, 31st March 2020)

Liverpool Echo:

Quoted extensively in article in March 2020.

<https://www.liverpoolecho.co.uk/news/liverpool-news/university-chief-offers-key-advice-17900560>

Quoted extensively in article in July 2020. [Anti-vaccine conspiracy theories and why expert says not to believe them - Liverpool Echo](#)

www.liverpoolecho.co.uk

We spoke to an expert health psychologist to find out why so many people are believing misinformation about

<https://www.liverpoolecho.co.uk/news/liverpool-news/anti-vaccine-conspiracy-theories-expert-18652400>

Liverpool Local (TV)

Monday 20th April 2020 <https://www.youtube.com/watch?v=vvNJXfsKBHA>

Monday 18th May 2020 https://www.youtube.com/watch?v=7mNEgcJop_4

Monday 24th August 2020 <https://www.dailymotion.com/video/x7vpm9e>

LJMU Communications Office: 30-minute Pandemic Podcast dropped on 20/7/20 at www.ljmu.ac.uk/podcast

Dr Samantha Brooks

Washington Radio (WTOP) 26th April 2020

BBC Radio Merseyside 30th April 2020

Latest Mednews podcast (Arizona, USA): 27th July 2020

Harfield Village Newsletter (Cape Town, South Africa)

<http://harfield-village.blogspot.com/2020/05/dreams-and-covid19-lockdown-why-is.html> (July 2020)

<http://harfield-village.blogspot.com/2020/04/the-cognitive-neuroscience-of-covid-19.html> (April 2020)

Dr Sarah Schiffing

The Conversation

Schiffing S, Breen L. 2021. **COVID vaccine supply is causing an EU crisis – so what's being done to speed up production?**

Schiffing S, Breen L. 2021. **COVID vaccine: some waste is normal – but here's how it is being kept to a minimum**

Schiffing S, Breen L. 2020. **COVID vaccines are starting to arrive – here's how everyone will get them**

Breen L, Schiffing S. 2020. **Vaccines are here, but how will we get them to billions of people?**

Radio Scotland Drivetime, interview on vaccine waste. 2021 <https://www.bbc.co.uk/sounds/play/m000s3sh>, BBC

The Roy Green Show, Corus Radio Network, Canada. 2021 <https://omny.fm/shows/roy-green-show/the-roy-green-show-podcast-january-31st-featuring>,

The Sydney Morning Herald, "A Hollywood film and a cunning plan: how Britain got its vaccine rollout right". 2021

<https://www.smh.com.au/world/europe/a-hollywood-film-and-a-cunning-plan-how-britain-got-its-vaccine-rollout-right-20210209-p57117.html>,

Al Jazeera, "COVID: How has the UK managed to master the vaccine roll-out?". 2021 <https://www.aljazeera.com/news/2021/1/25/whats-behind-the-uks-covid-vaccination-success>,

Konkret24, Utylizacja szczepionek "gigantycznym skandalem"? Nie, to trzeba uwzględnić. 2021 <https://konkret24.tvn24.pl/zdrowie,110/utylizacja-szczepionek-gigantycznym-skandalem-nie-to-trzeba-uwzledniac,1045836.html>,

Le Figaro, "Covid : la France anticipe-t-elle réellement 25 à 30% de pertes sur ses vaccins?". 2021 <https://www.lefigaro.fr/sciences/covid-la-france-anticipe-t-elle-reellement-25-a-30-de-pertes-sur-ses-vaccins-20210106>,

ZDF Heute in Europa "Spitzenreiter beim Impfen". 2021 <https://www.zdf.de/nachrichten/heute-in-europa/spitzenreiter-beim-impfen-100.html>,

BBC News, Outside Source, "Waste in the Vaccine Supply Chain. 2021 <https://www.bbc.co.uk/programmes/b05qmvwtw>,

Euronews, Good Morning Europe, "COVID vaccine: From factory to arm, the logistics of rolling out the Oxford-AstraZeneca jab". 2021

<https://www.euronews.com/2021/01/13/covid-vaccine-from-factory-to-arm-the-logistics-of-rolling-out-the-oxford-astrazeneca-jab>,

Concluding Remarks

Compared to our first report, there is continued growth in the size and reach of this group. For those who read this, we hope that you come away with a sense of the tremendous impact this group has begun to have, and what can be achieved by us in future years. There will be more publications in the coming months, and hopefully some funding successes in a less-than-generous landscape. We will be called upon for our expertise, to give opinions, to create evidence, to assess the evidence that exists, and to use our knowledge for the common good. We will need continued support from our host institution, and we must remain vigilant to seize opportunities to make a difference, but I feel proud that we are prepared for an uncertain future as our societies see the green shoots of recovery from what has been a tough year for humanity. In life we have a choice to be spectators or participants. The members of this group have chosen the latter.

Dr Mark Forshaw

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