

News from the South Wales MS Research Team – May 2022

Welcome to the latest edition of our annual newsletter which profiles some of our current research. Once again, thank you to all our participants who have continued to contribute data and samples this year to the SNOWDONIA project (formerly 'Epidemiology of MS' project), the DREAM Study of COVID antibodies, and the Welsh Neuroscience Research Tissue Bank. Without your support this research would not be possible!

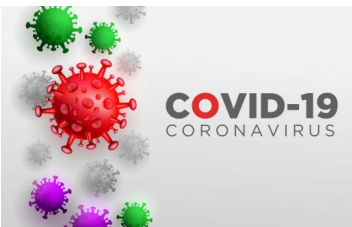
SNOWDONIA (formerly 'Epidemiology of MS Project')



Our longitudinal study, which began in 2006, has continued to collect clinical information and blood samples throughout the year. The pandemic has limited face-to-face clinical appointments so we rely even more on you completing the enclosed questionnaire to collect clinical information about MS, which could help multiple research studies.

As SNOWDONIA was reapproved by the Regional Ethics Committee in early 2020, ethical requirements mean that we have to ask you to consent to the study again. You may already have completed a consent form for the 'SNOWDONIA' study, but if one is enclosed with this newsletter, we would appreciate it if you could complete it and return in the FREEPOST envelope provided, along with your completed questionnaire. If you have any questions about the study or the consent form please contact msdata@cardiff.ac.uk.

COVID-19 vaccine response in people with multiple sclerosis



Over 750 people with MS in South Wales and Nottingham contributed 'dried bloodspot' samples via post, to help us investigate patterns of COVID-19 disease and response to COVID-19 vaccines in people with MS. A dried bloodspot is obtained by pricking a finger and dropping a couple of spots of blood on a special card, which when dry can be sent through the post. We obtained a large number of samples using this method (over 1600), showing the value of dried bloodspots as a way to collect biological samples remotely, which could be used in other studies.

In collaboration with colleagues in London, we have published data showing that some disease-modifying therapies for MS lead to a risk of reduced response to COVID-19 vaccination (a summary and link to the full article can be found at <https://tinyurl.com/2p9azrvz>). The data has contributed to national guidelines for people with MS, including who should receive additional doses of the COVID-19 vaccine. We are continuing to follow-up and obtain additional samples from people who receive further COVID-19 vaccine(s), to better understand the immune response to COVID-19 and vaccination in people with MS.

Other COVID-19 studies

- ◆ Data on health and wellbeing in relation to COVID-19, obtained by postal questionnaire during the first wave of the pandemic, has been analysed and we hope to publish this data soon.
- ◆ In collaboration with Nottingham, the risk of developing symptomatic COVID-19 infection after attending hospital for outpatient MRI examinations has been studied. The data suggests that there is a very small risk of acquiring clinically significant COVID-19 infection. However, it is unlikely that this risk is directly attributable to radiology/MRI attendance, and the true risk is likely to be even lower. The pre-print manuscript (not yet peer-reviewed) is available at <https://tinyurl.com/55h76ffp>.

For information on the C&V Neuroinflammatory Service and Covid-19 information see:

<https://cavuhb.nhs.wales/our-services/ms-multiple-sclerosis/>

Duration and patterns of disease-modifying therapy use in MS

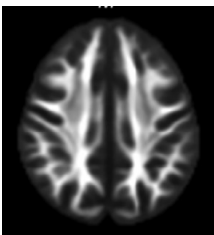


Disease-modifying treatments (DMTs) offer significant reductions in disability and improve outcomes for people living with MS. However we want to understand how DMTs perform in the real-world and

are using the long-term data we have collected to investigate this. We are exploring patterns of DMT use, calculating the length of time people with MS spend on different DMTs, and the reasons they stop or switch particular DMTs.

Early results demonstrate that there is a large variation in time spent on different DMTs. Cladribine (Mavenclad®), ocrelizumab (Ocrevus®), alemtuzumab (Lemtrada®) and natalizumab (Tysabri®), showed the longest time spent on them overall. Lack of efficacy and adverse events (such as DMT side effects and injection-site reactions) were the commonest reasons for stopping a DMT. We are expanding this analysis to data available from several other UK MS centres, and anticipate that the results of this work will help us to use DMTs more effectively in people with MS.

Longitudinal imaging of lesions in early MS



Dr Ray Wynford-Thomas has recently embarked on the last part of her PhD study, using MRI to look at how lesions evolve in early MS. Lesions visible on brain MRI scans reflect areas of damage, which can relate to the symptoms people experience with MS.

Dr Wynford-Thomas is asking a small number of people who have been newly diagnosed with MS to have an MRI scan every month for a period of 6-months. Using advanced MRI analysis techniques, she plans to track the development and resolution of brain lesions. This will provide valuable knowledge on imaging markers (features on MRI scans) that are able to predict and measure recovery in MS, allowing for more personalised treatment.

Neuropsychological evaluation and rehabilitation in MS (NeuroMS)

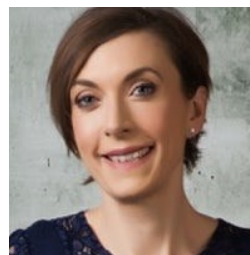


We are collaborating in a study being led by Nottingham University which aims to routinely assess all people with MS for cognitive problems (e.g. memory, attention and problem solving). You may have received

an invitation to complete a series of assessments before attending an NHS MS clinic appointment recently.

The aim is to develop a method to routinely assess cognition in people with MS, as well as develop and test a short neuropsychological rehabilitation programme for people with mild cognitive problems. This rehabilitation programme would aim to tackle cognitive difficulties directly, and target everyday situations to enhance people's cognitive functioning, independence, and psychological well-being. Find out more at <https://www.neuoms.org/>.

Meet a Team Member: Dr Emma Tallantyre



Emma is a senior member of the research team and combines her clinical work with research on outcomes in neuroinflammatory disease and clinical trials. She is a principal investigator on the

DELIVER-MS clinical trial, investigating optimum treatment approaches in MS, and has recruited 65 participants to the study in Cardiff. She likes research projects that link many centres across the UK and globally, aiming to share understanding and generate better work by joining up. Emma is also a strong advocate of public and patient involvement in the development of research.

Away from work Emma can be found spending time with family and friends, and pursuing a wide range of energetic activities! This includes riding 520km over 6 days in Kenya to raise money for maternal and neonatal health initiatives, an endeavour that she is planning to repeat this year!



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