



## Department of Nursing & Midwifery Research Newsletter



**Welcome to our quarterly research newsletter from the Department of Nursing and Midwifery at the University of the Highlands and Islands.**

Welcome to Spring. Despite the last month marking the one-year anniversary of Covid-19 restrictions in Scotland the signs of spring bring a renewed sense of hope. Spring marks the beginning of growth and productivity in our research activity as many of our research projects come to fruition and others restart. Conducting social science research during the Covid-19 pandemic has given us a privileged view of the direct impact on healthcare service delivery and people's everyday lives. There have been many unintended consequences such as people delaying help for non-Covid health problems – see the article below by Dr Clare Carolan exploring the lived experience of seeking help for health issues. Importantly, we continue to deliver non-Covid research, such as the HALT trial, Movement to Learn and SIPA-2. There have also been stories of the significant personal sacrifices that healthcare staff continue to make to provide care during Covid-19 – read information on our Care Home Staff Experience Study below. Our Department staff and doctoral students continue to contribute to the global effort of the Covid-19 pandemic by exploring the impact on people's health and healthcare to inform supportive interventions. Given our Department also continue to support approximately 400 undergraduate student nurses and 130 postgraduate students this work highlights the resilience of all staff within the Department – in particular as we continue to work in partnership with our clinical colleagues supporting our students and our research as we learn and adapt on route.

[Dr Michelle Beattie](#)

Lecturer and Assistant Head of Research



We are always looking to improve and evolve our Research Newsletter. If you have any suggestions for improvement please get in touch with Rachel, Department Administrator, responsible for compiling the newsletter alongside Michelle.

Rachel Phillips Doig - [rachel.phillipsdoig@uhi.ac.uk](mailto:rachel.phillipsdoig@uhi.ac.uk)



## What do we do?

Our research aims to foster a strong research community in the Highlands and Islands and build research collaborations nationally and internationally. This enables us to address key health questions relevant to Scotland and beyond and conduct high quality research that improves health and wellbeing within the Highlands and Islands. We conduct research to improve health and wellbeing in remote and rural regions that has international significance and spans urban populations. Our research expertise includes:

- Health promotion and disease prevention
- Active health
- Health and social care interventions and evaluation
- Improvement science
- Nurse education

## Care Home Staff Experience Covid-19: Recruitment Challenges and Tips

Researchers within the Department of Nursing and Midwifery are working with academics at the University of Northumbria and the Balhousie Group (owners of 25 private Care Homes) to explore the stress and coping experiences of care home staff. The study includes an online survey and virtual interviews. The initial recruitment approach of embedding the online survey link within the Balhousie Staff Newsletter resulted in a poor response. Low recruitment has likely been due to a number of factors, not least as the care home staff continue to work within the challenges of the Covid-19 pandemic. We have recently revised our recruitment strategy using some quality improvement principles:

QI Principle	Revision to Recruitment Strategy
Connecting with aspects of staff's internal motivation (pull not push)	Creating a <a href="#">short video</a> offering a safe space to share their experience
'Making the right thing the easy thing to do'	Ensuring the survey is available via a scannable QRS code.
Making use of existing workplace ergonomics	Embedding the video and link to survey within digital hand sanitiser displays (see photo)
Embedding recruitment within existing processes	iPad with survey link available while staff have 10-minute wait post Covid vaccination



Recruitment to studies has always been challenging but the Covid-19 pandemic likely adds to the complexity. Of course, the

burden of any study on overstretched staff requires careful balancing. We have reduced the potential burden by creating a quick and easy survey (approximate completion time of 5 minutes) and scheduling interviews at a time convenient to the participant.

Anyone requiring any further information about the study, please contact [Michelle.Beattie@uhi.ac.uk](mailto:Michelle.Beattie@uhi.ac.uk)

## Movement to Learn

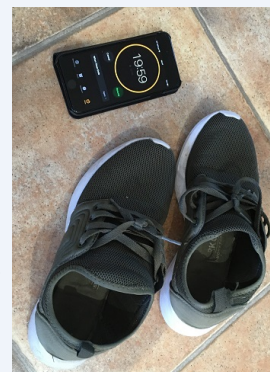


[Professor Trish Gorely](#) tells us more about a recently completed project looking at the impact of the developmental movement programme 'Movement to Learn' in children during their first year at school.

Movement to Learn was created because of evidence that poor physical development and neuromotor immaturity in young children impacts their readiness for school, behaviour, social development and academic achievement. For example, the retention of primitive (infant) reflexes in children as they start school is a sign of immaturity in neuromotor functioning. There is evidence that this neuromotor immaturity is associated with underachievement in reading, writing and maths. In this project with colleagues in England we explored the extent to which primitive reflexes were present in a group of 120 children from 4 different schools as they started formal schooling (age 4-5 years). We then delivered

Movement to Learn to half the classes for a school year and assessed its impact on the children's physical development. Movement to Learn involves 20 minutes of daily movement activities undertaken in class time, led by class teachers, and using everyday resources available in schools.

The data demonstrate that a high percentage of young children are, starting school with indications of immature motor skills (ie with one or more primitive reflexes retained to some extent). Results showed that those children who took part in Movement to Learn had significant improvements in neuromotor maturity, while those receiving only the early years curriculum showed no improvements. In addition, compared to the comparison group the intervention group showed significant improvements in physical development tests for balance, manual dexterity and overall physical development. Furthermore, for the groups receiving Movement to Learn teachers reported improvement in academic factors (e.g., writing, listening, and following instructions), physical skills (e.g., coordination, handwriting, cutting, gross and fine motor skills) and behaviour (e.g., calmer, more alert).



Some of the conclusions we drew from this project were that: (1) engagement solely in activities outlined with the early years' curriculum does little to improve neuromotor maturity and physical development and (2) 20 minutes of daily movement activities undertaken in class time, led by class teachers, using everyday resources available in schools has the potential to improve neuromotor function and physical development - key building blocks to successful learning. We suggested that future research could examine optimal ways that this and similar age appropriate programmes could be introduced into all schools to improve children's neuromotor readiness for learning.

Further information about the study is available from Professor Trish Gorely – [trish.gorely@uhi.ac.uk](mailto:trish.gorely@uhi.ac.uk).

**Creating Compassionate Virtual Communities to Support Palliative/End of**

## Life Care Needs in the Highlands

Drs [Leah Macaden](#), [Clare Carolan](#) and Kirsten Broadfoot have spent the last few months collecting and analysing participant and facilitator experiences of Last Aid training sessions offered across the region by Highland Hospice. The three researchers from UHI have now been included as members of LARGE (Last Aid Research Group Europe). Preliminary findings grounded in both survey and interview data are now guiding the development of a multi-centric questionnaire by LARGE to evaluate Last Aid training sessions in Europe, the rest of the UK and Australasia.



Data from the UHI-Highland Hospice study will also be used to inform and expand facilitator training and session design moving forward so that Last Aid training continues to raise awareness, expand capacity and conversations around death, dying, grief and bereavement for individuals, families and communities.

Further information about the study is available from Dr Leah Macaden – [leah.macaden@uhi.ac.uk](mailto:leah.macaden@uhi.ac.uk).

## Help-seeking during the Covid-19 pandemic

Help-seeking in health care contexts is a complex phenomenon. Barriers to help-seeking within remote and rural contexts are recognised and include longer symptom appraisal times with consequent delayed presentation to healthcare services. Reported increases in the number of avoidable deaths from causes such as cancer or cardiovascular disease due to the Covid-19 pandemic in the UK are expected. Taken together these influences will likely impact on the morbidity and mortality of those living in remote in rural contexts who develop new physical health symptoms during the Covid-19 pandemic.

Dr Clare Carolan from the Department of Nursing and Midwifery is working with Dr Gareth Davies from Lews Castle College to explore the lived experience of seeking help for new physical health symptoms of adults living in remote and/or rural Scotland during the Covid-19 pandemic. The study hopes to understand what influences help-seeking decisions for new physical health symptoms during the pandemic and to identify any barriers to help-seeking. Findings will help inform public health messaging about help-seeking and shape access to healthcare services. For further information about the study please visit <https://www.lews.uhi.ac.uk/research/harp-cov-help-seeking-among-rural-populations/>

## CHARIS

As part of the CHARIS study, we are currently conducting a telephone survey of a nationally representative sample of adults living in Scotland to determine adherence to transmission reducing behaviours (TRBs) during the Covid-19 vaccination programme. We asked people about their adherence to physical distancing, face covering and hand hygiene guidance. As so much is still unknown in relation to the Covid-19 vaccine, TRBs remain an important aspect in slowing the spread of Covid-19. The aim of this study is to investigate the influence of Covid-19 vaccination on TRBs. We asked individuals whether they had received or intended to receive the vaccine, whether they had left their home in the past week and if so their adherence to transmission reducing behaviours. We also asked people about their beliefs about receiving the vaccine and their subsequent risk of Covid-19.



This study is being conducted by the University of Aberdeen in partnership with the University of the Highlands and Islands. The project is led by Professor Diane Dixon from the University of Aberdeen.



## SIPA 2 – Improving Pharmaceutical Care for Older Adults with Sensory Impairment



Older people with visual or hearing impairments are more likely to be taking more than one medication and live alone.

This project builds on previous work undertaken by Professor Annetta Smith and Dr Leah Macaden with research colleagues from Dundee & Aberdeen to explore access to pharmaceutical care services by those with sensory impairment between 2015 & 2017. A grant from the Chief Scientist Office (CSO), part of the Scottish Government Health Directorates, was the first of its kind to explore both the needs and experiences of pharmaceutical care among older people on polypharmacy (managing

multiple medicines) living with sensory impairment(s). Findings from this study identified the problems caused by sensory impairment right across their pharmaceutical care journey often associated with communication difficulties and safety concerns which led to sub-optimal pharmaceutical care. Difficulties with managing medications for older people with sensory impairment/s [OPwSI] and on polypharmacy include problems identifying similar-looking pills, reading labels and information sheets or mis-hearing information provided by health professionals.

Professor Smith and Dr Macaden are now collaborating with researchers at the University of Strathclyde, The Research Institute for the Care of Older People and Designability on a two-year £257,000 study, called SIPA2, funded by [Dunhill Medical Trust](#) to analyse images, text and spoken word to map user and professional journeys around medication. The project has convened a Project Advisory Group of individuals, including older people with sensory impairment, to work together to derive specifications for desirable characteristics for new products which might assist medicines management and will review technology which is or could be used by older people with sensory impairment to safely and effectively manage their medicines. The research team will also develop educational materials for health and social care providers involved with medicines management for older people with sensory impairment.



Further information about the study available from Professor Annetta Smith – [annetta.smith@uhi.ac.uk](mailto:annetta.smith@uhi.ac.uk).

## Participating in the Hernia Active Living Trial

Department researchers [Julie Munro](#) and [Professor Gill Hubbard](#) are working on The Hernia Active Living Trial (HALT) - an exercise intervention for people living with a stoma. Neil Barker shares his experiences of living with a hernia and taking part in the trial.

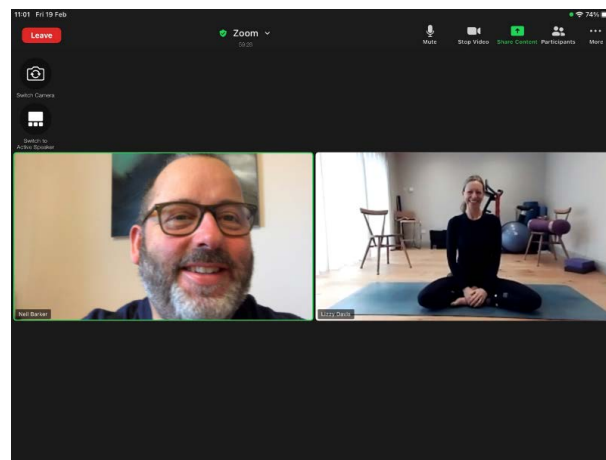
Truth be told, I didn't get the importance of the post-operative, early days and weeks core strengthening exercises my

Stoma Nurse set me. So not being a 'six pack' guy before, nor after, I developed a parastomal hernia in the months following as I stepped up my exercise. After completing a 10-week series of instructor led core strengthening exercises as part of this trial, my view of these discreet low intensity exercises has changed entirely. They ARE challenging if done right and they have strengthened my core and will continue to do so, because now I've discovered them, I'm not stopping.

I mentioned 'doing them right', that's where the tuition comes in. Lizzy, my trainer was with me for an hour a week, demonstrating then watching how I then performed the exercises. That feedback from someone over 600 miles away by Zoom was invaluable. I had read the excellently illustrated exercise booklet and watched the videos, yet I didn't always appreciate some of the nuances of posture, breathing or positioning. Having eagle eyed Lizzy closely observing, encouraging, and correcting was key. That then sets you up for post-trial life. If you have heard of Pilates, these exercises are tailored on those.

Do I still have a parastomal hernia? Yes. It is still the same size? Yes, but I know I have found my 'core' now and with these exercises believe I'm better placed to enjoy paddle boarding, rock scrambling and other physical activities with greater confidence.

I also think this is a great initiative for all who face abdominal surgery and can take time to prepare their core beforehand.



## Rural Nursing Research – Seonaid C Mackay



In the context of global nursing shortages, recruitment and retention of nurses is an increasingly important challenge for the sustainability of healthcare delivery, particularly in rural and remote settings. As part of the backdrop of my PhD studies, I recently published a [systematic review](#) which highlighted that literature has only begun to explore the interplay between the personal, professional and place related dimensions that influence nurses decision making to work in remote and rural areas. There is a particular need to understand nurses' experiences over time.

Using an autobiographical (or life history) approach, 25 rural nurses participated in the study. Some are from the Western Isles (WI) and have remained there, some have left and worked elsewhere and then returned, and some have come to work in the WI from elsewhere. Through a narrative lens, life stories are appropriate for understanding a lifetime of occupational experiences and for appreciating the personal, professional, social, economic, historical and geographical influences that shape these experiences through the course of a career.

Based in the Isle of Lewis, as an ophthalmic practitioner, I have an understanding of the

uniqueness and essence of rural nursing and feel privileged to interpret the rich, insightful data gleaned from the interviews that speak of the challenges associated with the expert generalist role, the implications of living and working in the same community, such as high visibility, lack of anonymity and privacy, the invisible kinship to land, the challenges of isolation and the intricate patterns of rural culture in the Western Isles.

I am immensely thankful to the rural nurses who were willing to take part in this study and for the continuing support and guidance from my PhD supervisors: Professor Annetta Smith, Dr Michelle Beattie and Dr Richard G Kyle as this exciting, inspiring and creative journey continues.

Seonaid's PhD is registered with the University of Stirling and supervision has continued since our transfer to UHI to provide continuity of student experience



## PhD Student Profile – Rebecca Hunter

Rebecca started her PhD in April 2018 and divides her time between research and clinical duties. Her experience as a physiotherapist led her to become interested in the management of long-term pain conditions and back pain in particular. Having always loved the latest 'tech', Rebecca combined her interests, to pursue a PhD in the digital self-management of chronic low back pain with a particular focus on remote and rural access to healthcare. To hear a little more, please watch this 2 min profile video.



Anyone interested in any further information about Rebecca's study please contact her [rebecca.hunter@uhi.ac.uk](mailto:rebecca.hunter@uhi.ac.uk).

Visit our [website](#) to find out more about PhD students within the Department of Nursing and Midwifery.

## Interested in doing a PhD?

If you are passionate about an area of healthcare practice and want to make a research contribution to your field, a PhD could be the route for you. Doing a PhD provides you with the opportunity to go to the depths of critical enquiry into a chosen topic enabling exponential personal and professional growth. Doctoral studies are challenging, but we provide you with support and encouragement every step of the way. Our department research team gets to know you which enables tailored supervision to your individual learning needs and styles. We can also provide inter-department and across University supervision to ensure students have access to the right supervisors. Students also have access to the University's Graduate School which provides access to training and guidance on administrative procedures.

Anyone interested in conducting a PhD please contact Dr Michelle Beattie [michelle.beattie@uhi.ac.uk](mailto:michelle.beattie@uhi.ac.uk) for informal enquiries.

## Recent Publications

Akinosun, AS., Polson, R., Diaz-Skeete, Y., De Kock, JH., Carragher, L., Leslie, S., Grindle, M. & **Gorely, T.** (2021), 'Digital Technology Interventions for Risk Factor Modification in Patients With Cardiovascular Disease: Systematic Review and Meta-analysis', *JMIR mHealth and uHealth*, vol. 9, no. 3, e21061.

<https://doi.org/10.2196/21061>

Den Daas, C., **Hubbard, G.**, Johnston, M. *et al* (2021) 'Protocol of the COVID-19 Health and Adherence Research in Scotland (CHARIS) study: understanding changes in adherence to transmission-reducing behaviours, mental and general health, in repeated cross-sectional representative survey of the Scottish population', *BMJ open*, vol. 11, no. 2, e044135.

<https://doi.org/10.1136/bmjopen-2020-044135>

Harrington, D., Ioannidou, E., Davies, M., Edwardson, C., **Gorely, T.**, Rowlands, A., Sherar, L. & Staiano, A. (2021) 'Concurrent screen use and cross-sectional association with lifestyle behaviours and psychosocial health in adolescent females', *Acta Paediatrica*, 1-7. <https://doi.org/10.1111/apa.15806>

Hartwig TB., *et al* (2021) 'School-based interventions modestly increase physical activity and cardiorespiratory fitness but are least effective for youth who need them most: an individual participant pooled analysis of 20 controlled trials', *British journal of sports medicine*.

<https://doi.org/10.1136/bjsports-2020-102740>

**Macaden, L.** (2020) 'Nursing Research in India: Keeping Pace or Time to Catch up?' *The Indian Journal of Continuing Nursing Education* 21(1), 6.

**Mackay S., Smith A., Kyle R., Beattie M.**, (2020) 'What influences nurses' decisions to work in remote and rural settings? A systematic review and meta-synthesis of qualitative research.' *Rural and Remote Health Journal*. Vol, 21, Issue 1,

<https://doi.org/10.22605/RRH6335>

Morrison, C., **Beattie, M.**, Wherton, J., Stark, C., Anderson, J., Hunter-Rowe, C. and Gray, N.M., (2021) 'Testing and implementing video consulting for outpatient appointments: using quality improvement system thinking and codesign principles.' *BMJ open quality*, 10(1), p.e001259.

<https://bmjopenquality.bmj.com/content/bmjqr/10/1/e001259.full.pdf>

Preedy P., Duncombe R., **Gorely T.**, (2020) 'Physical development in the early years: The impact of a daily movement



programme on young children's physical development.' *Education 3 – 13*.

[DOI: 10.1080/03004279.2020.1849345](https://doi.org/10.1080/03004279.2020.1849345)

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Smith L., Pardhan, S., **Gorely, T.**, Barnett, Y., Jacob, L., López-Sánchez, GF., Tully, M., Shin, Ji., Ki, A., (2021) 'Physical activity and visual difficulties in 36 low- and middle-income countries'. *In: Eye*.

-  
**Walters, R., Macaden, L., Tracey, A. and Smith, A.** (2021) 'Low Fidelity Simulation on Sensory Impairments in Older Adults: Undergraduate Nursing Students' Self-Reported Perceptions on Learning. *Open Journal of Nursing*, **11**, 89-103.

[10.4236/ojn.2021.113009](https://doi.org/10.4236/ojn.2021.113009)

## Meet our Research Staff

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| <ul style="list-style-type: none"><li>• <a href="#">Neil Angus</a></li><li>• <a href="#">Dr Michelle Beattie</a></li><li>• <a href="#">Marie Cameron</a></li><li>• <a href="#">Dr Clare Carolan</a></li><li>• <a href="#">Professor Trish Gorely</a></li></ul> | <ul style="list-style-type: none"><li>• <a href="#">Jonathan Gray</a></li><li>• <a href="#">Hannah Hollinger</a></li><li>• <a href="#">Professor Gill Hubbard</a></li><li>• <a href="#">Dr Leah Macaden</a></li></ul> | <ul style="list-style-type: none"><li>• <a href="#">Julie Munro</a></li><li>• <a href="#">Robert Polson</a></li><li>• <a href="#">Dr Michelle Roxburgh</a></li><li>• <a href="#">Professor Annetta Smith</a></li></ul> |
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