



Department of Nursing & Midwifery Research Newsletter



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

May is a month to reflect and be proud of our research contributions. As a Department of Nursing and Midwifery we have celebrated both the *International Day of the Midwife* on the 5th May and *International Nurses Day* on the 12th of May. The *International Day of the Midwife* was established at the International Confederation of Midwives Conference in the Netherlands in 1987 to recognise and honour their work. *International Nurses Day* was marked as the birth of Florence Nightingale. Both days are celebrated around the world to mark the contribution that nurses and midwives make to society. Whilst we recognise the value of our professional identities (i.e., asking and answering research questions unique to our roles) our research is strengthened by the excellent work of our allied health professionals and behavioural scientist colleagues; the collective whole being more than our individual parts. The recently published REF results within the allied health professions, dentistry, nursing, and pharmacy unit of assessment highlight the quality and reach of our contribution – with 66% of publications recognised as world leading or internationally excellent, as well as impactful case studies.

This newsletter highlights some of our contributions, from a scoping review of health and social care services in Remote and Rural communities influencing policy to piloting pilates exercise as an intervention for those living with a stoma to improve people's quality of life. Note our article from the Highland Health Sciences Library as an example of their contribution to translating research into practice. Rob Polson, Specialist Subject Librarian, retires this month and his involvement in research, particularly supporting publishable systematic reviews will be sorely missed. Our research is diverse, yet our common thread is our focus on the application of research into both policy and practice (see article on realist methods as an example of implementation science). Ultimately our research improves people's lives in our local communities and beyond.



[Dr Michelle Beattie](#)
Senior Lecturer and Assistant Head of Research



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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

You can view our Research Strategy [here](#).

Health and Social Care Provision in Rural and Islands Communities during the Pandemic

The Scottish Government established a public inquiry to examine the handling of the COVID-19 pandemic in Scotland. Professor Gill Hubbard from the Department of Nursing and Midwifery, UHI, Professor Sandra MacRury, Scottish Rural Health Partnership and Dr Kirsten Broadfoot, Sterena Consultancy responded to this inquiry.

We aimed to understand the provision of health and social care services during the pandemic from the perspectives of different rural and island communities in Scotland. We conducted a rapid scoping review of evidence about health and social care provision in rural and island communities during the pandemic and gathered key informant (e.g. care home staff, GPs, service managers) personal reflections.

The full findings of this work will be published by the Scottish Government. Here, we provide a brief summary of our key conclusions from this work:

- The decision to prioritise the acute healthcare sector severely impacted social care provision aided only by community organisations who partnered with both health and social care providers to meet the needs of community members as stop-gap measures.
- This prioritisation also had devastating consequences for care home staff and residents. Inhumane policy, implemented at the time to keep coronavirus at bay, has negatively impacted the mental health of residents, staff and carers.
- A whole systems approach may not have stopped this prioritisation but at least, strategic planners and managers could have mapped out the knock-on effects on other parts of the care system. Such an approach is crucial in rural and island communities, and required at national and local levels.
- More attention needs to be paid to continuously develop community care capacity and the care infrastructure so that communities can be quickly mobilised in crisis situations. We visualise this as networks within networks, where resources, learning and capacities are shared.
- Finally, the risk of infection during a pandemic must be weighed against the risk of losing humanity. Balancing these risks should be decided by the nation, by local communities and within each family



Please contact [Prof Gill Hubbard](#) for further information.



Hernia Active Living Trial (HALT) Results

Our HALT trial is now complete and we have published the full report, with an article being produced for submission to a peer reviewed journal. The full report is available from [Julie](#) or [Gill](#). The trial involved referral to an online pilates based exercise intervention based on the hypothesis that abdominal exercises counteract a weakness in the abdominal wall from surgery and that abdominal and breathing exercises contribute towards strengthening the body core so that there is better control of intra-abdominal pressure. The main outcome of this feasibility study was a decision by an Independent Study Steering Committee to proceed, or not, to an effectiveness RCT.

Seventeen participants consented and 13 were referred to the exercise intervention in the single-arm trial and 19 participants were randomised to the intervention or control group in the feasibility RCT. Qualitative data suggests that participants

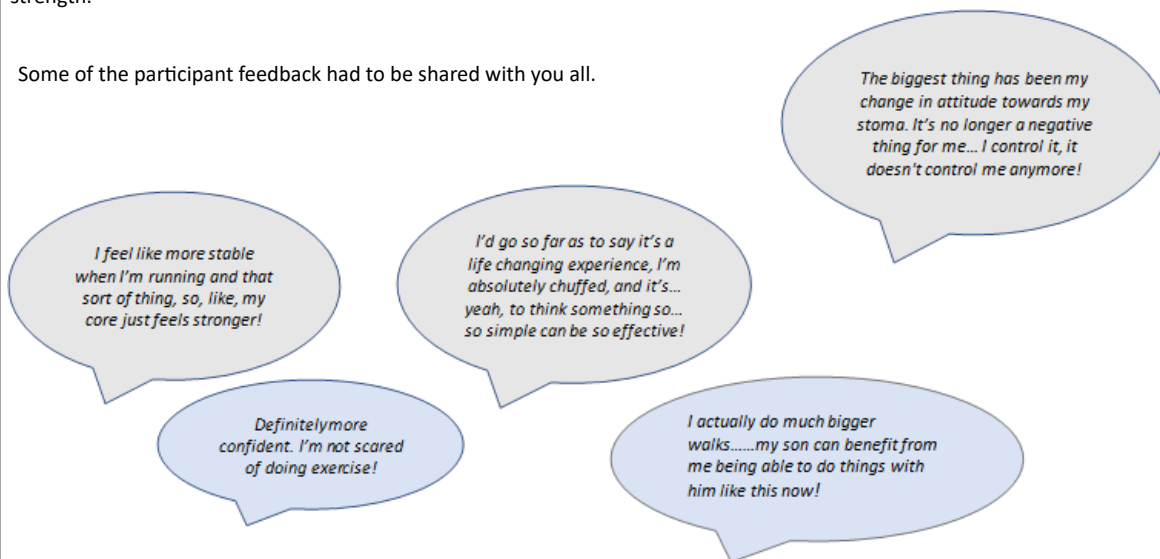
perceived physical and mental health benefits of the exercise intervention. Perceived physical benefits aligned with the hypothesised benefits of the exercise programme i.e., improved breathing technique, core control and strength. The exercise programme was safe; there were no adverse events. Participants experienced challenges and issues during the exercise programme including pain and discomfort around the stoma but these were within acceptable limits and not all were attributed to the exercise programme.

On average people received 8 sessions with a clinical instructor, for around 45 minutes each. Those that took part were very motivated with their exercises with 92% completing their exercises each week.

Intervention retention rates were good, with 69% completing their course. Retention rate for data completion was poorer at 47%. We are planning some work to establish reasons for the low retention rate and ways to improve on this before embarking on a RCT. The exercise intervention is feasible to deliver and acceptable to participants. Self-reported physical benefits aligned with the hypothesised benefits of the exercise programme i.e., improved breathing technique, core control and strength.



Some of the participant feedback had to be shared with you all.



Please contact [Julie Munro](#) for further information.

Male Attitudes towards Nursing as a Profession: MANUP Study

Within the nursing profession in the UK and overseas, the majority of practising Registered Nurses identify as female. With an ever-growing rise in nursing vacancies across the country and a continued drive for increased diversity within the profession, it is clear that more needs to be done to better understand why certain population groups choose careers other than nursing.



Undergraduate Nursing Student, Sam Thomas and Senior Lecturer, Marie Cameron are launching new research that aims to explore the attitudes of young males (aged 18-24) towards the nursing profession and identify some of the factors that influence perceptions of nursing careers.

Those interested in taking part in the study will access an online questionnaire, promoted via social media, to complete a series of questions relating to their views towards nursing. It is hoped that the study will provide a new insight into this population's attitudes towards the profession and inform future recruitment strategies for undergraduate nursing programmes.

Sam says, "I am really excited to be involved with this new study that will hopefully allow us to better understand why fewer young men join our fantastic profession and provide a solid foundation to support ongoing recruitment methods".

Marie says "I am thrilled to be working on this important project with Sam. It is wonderful to see an undergraduate student with such a passion for research and such an interest in issues relating to equality and diversity in nursing. We hope that the



project will add to the knowledge base around factors impacting on young males pursuing a career in nursing, so that we might work towards an improved gender balance in this and other “caring” professions.

For further information on the MANUP Study, please contact [Sam](#) or [Marie](#). You can also search for [#MANUP_Study](#) on twitter and Facebook.

The Role of Realist Review in Implementation Science

A key aim of the UHI Department of Nursing and Midwifery’s research strategy is to demonstrate that our research has a meaningful impact on people’s health and well-being. A further aim is to raise the profile of our research activity and expertise locally, nationally, and globally (1). A way to achieve both goals is to engage in more implementation research using theory-led methodology.

Implementation Science has been defined as “the scientific study of methods to promote the systematic uptake of research findings and other evidence-based practices into routine practice, and hence, to improve the quality and effectiveness of health services and care” (2). There is no point knowing that an intervention is effective if we do not know how to implement it in a way that retains its effectiveness. By extension, if we do not understand how and why an intervention works, how can we understand why an intervention succeeds in one setting but fails in another? This is why implementation science that is underpinned by theory is so important to healthcare research.

Theories help researchers understand how and why an intervention is thought to work in a particular context. In this way, propositions about causal processes are created which can be tested to see whether they hold. Failing to engage in theory-led research has been described as “an expensive version of trial and error” (3) and the Medical Research Council is encouraging more theory-led evaluation of complex health interventions (4). A realist review is a theory-driven approach to evaluation which makes it well suited to implementation science.



Realist Synthesis

A realist review is a form of literature review intent on understanding social programmes, initiatives, or interventions. This approach to evaluation accepts that no social intervention will be implemented identically. This uniformity is impossible when dealing with complex social interventions being inserted into complex social settings. Consequently, instead of reviewing the evidence to see whether an intervention works or not (which is likely to produce a lukewarm ‘to some extent’) a realist review explores and tests the assumptions (i.e., theories) that underpin the social intervention to provide an explanatory analysis of what works, why, for whom and in what circumstances. In this way, a realist review uses theory to make sense of the complexity inherent in social programmes. This use of theory is not exclusive to realist research, what sets it apart, however, is the generative model of causation it uses in theory building. For realists, the key to understanding causal processes is look past the observable and empirical level of reality, to consider the unseen generative mechanism(s) at work.

A realist review does not offer a one-size-fits-all solution to the problems of health and social care because magic bullets do not exist. Instead, it provides policy makers, programme developers and researchers with a better understanding of how and why different people respond to programmes in a particular situation. In this way, a realist review adds to the reader’s general understanding and experience of programme implementation, a process referred to as ‘sense making’ (5). Over time, this sense-making can lead to a sustained shift in thinking in which the research results have helped change a person’s approach to social programme implementation in general (6). This approach to implementation science is one example of how the Department of Nursing and Midwifery demonstrates impactful research.

Further information on realist reviews is available [here](#) and/or a conference presentation (click image below).



I've found the swamp, now what?

A Guide through a Realist Review

Rebecca Hunter
PhD. Student, Department of Nursing and Midwifery
University of Highlands and Islands

For further information please contact [Rebecca](#).

Is that a pandemic I see behind you?

[The Highland Health Sciences Library \(HHSL\)](#) promotes and supports evidence-based practice within UHI and NHS Highland (NHS) and has contributed to a wide range of research work within both institutions.

The Public Health Department of NHS Highland has used the expertise of the HHSL service to inform its response to the COVID pandemic. Starting with developing effective information flows to help forecast and plan for various outcomes, the focus then evolved to finding information relating to specific issues such as therapies (eg best evidence for the use of continuous positive airway pressure) and service provision (eg levels of intensive care capacity required).

UHI LibGuides software was used to collate information, but as the volume of material increased – tens of articles per day rapidly became hundreds – new ways of controlling the information flow were developed. New topics needing evidence also emerged, eg best practice in dealing with ITU psychosis. Search strategies were developed and converted into targeted alerts, and daily monitoring developed of key sites including the media and organisations such as Independent Sage. Latterly support moved to retrieving information on new variants to provide evidence for potential threats and needs.

Feedback from Public Health has been positive:

“... support has allowed us to keep up with the flow of new information, and to provide the best service we can to the care workers, doctors and departments that ask us for advice”.

HHSL was part of national and global efforts of librarians sharing search strategies, collating information, and collaborating with bodies such as World Health Organisation.

Planning at all levels is currently needed to prepare for the next pandemic – which is a certainty. This HHSL pandemic work highlights the need for rapid analysis, summary, and dissemination of the vast amount of data produced by such events. To this end a research project has been proposed to UHI Computing to develop some form of artificial intelligence/machine learning to carry out this vital work.

PhD Student Profile – Chrissie Lane

Chrissie Lane moved up to Highland in 2005 looking to undertake big adventures by bike, sea kayak and on foot which were completely scuppered in 2006 by the arrival of a rather unplanned child. Life veered off that course for a while, concentrating on motherhood and ploughing forward to establish the role of the cancer consultant nurse in Highland, never ceasing to be amazed by the people she works with and those being cared for within cancer services. Fast forward to 2018 when she was successful in obtaining a City Deal PhD scholarship. Not too bad for someone who struggled with the structure of school, scraping through the exam system.



Excited at last to not be the one feeding in ideas to other academics but to be able to explore and undertake research that may have a positive impact upon people diagnosed with cancer. From listening to peoples' stories of what they had found helped them recover from cancer she was struck at how people were using nature –

whether that be only looking out from a car window when they felt too fatigued or unwell to do anything - through to walking, cycling, running, hugging trees or just plain sitting by a loch and watching the clouds go by and feeling the wind on their face. Intuitively you would think that the evidence base for so called nature-based interventions was strong but that is not the case within cancer care. Although we know from other contexts such as mental health that spending time out in nature can improve peoples' mental health and well-being. This area of health has seen a plethora of published research during the covid 19 pandemic for obvious reasons. Undertaking some form of physical activity also has many benefits for people recovering from cancer such as reducing the side effects of treatments, improving fatigue levels, increasing self-efficacy and overall quality of life. Therefore, Chrissie was interested in whether nature-based interventions might be of benefit within the cancer pathways to improve peoples' adjustment through cancer and their health & wellbeing. Filled with enthusiasm and developing a knowledge mindset she set off wondering if people recovering from cancer might be interested in undertaking natural movement in nature such as walking on tree trunks, swinging from branches, carrying logs and crawling through the landscape. However, conversations with people diagnosed with cancer led her to her first research study exploring the experiences and potential impact on wellbeing of cycling ebikes in nature. Evidence from other areas of health care suggests that from a physical activity perspective ebikes increase people's overall activity levels with associated improvements in their quality of life. What has not been studied is whether riding an ebike through nature (not on the roads) as a nature-based intervention will have positive outcomes for people who have had a cancer diagnosis.



Chrissie used a mixed methods approach of velo-mobile interviews (cycle along interviews), GPS tracking data and use of nature questionnaires. She can currently be located somewhere indoors analysing rather a lot of video data being intrigued as a clinician about health geography and the discipline of mobilities.

Please contact [Chrissie](#) for further details and visit our [website](#) to find out more about PhD students within the department.

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](#) for informal enquiries.

Recent Publications

Booth JN, Chesham RA, Brooks NE, **Gorely T.** & Moran CN. (2022) 'The Impact of the Daily Mile™ on School Pupils' Fitness, Cognition, and Wellbeing: Findings From Longer Term Participation. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.812616>

Fraser MJ, Leslie SJ, **Gorely T.** Foster E, **Walters R.** (2022) 'Barriers and facilitators to participating in cardiac rehabilitation and physical activity: A cross-sectional survey'. *World Journal Cardiology*, 14(2):83-95. <https://doi.org/10.4330/wjc.v14.i2.83>

Fraser MJ, **Gorely T, O'Malley C**, Muggerridge DJ, Giggins OM, Crabtree DR. (2022) 'Does Connected Health Technology Improve Health-Related Outcomes in Rural Cardiac Populations? Systematic Review Narrative Synthesis'. *International Journal of Environmental Research and Public Health*, 19, 2302.
<https://doi.org/10.3390/ijerph19042302>

Goodman, W, Downing, A, Allsop, M, **Munro, J**, Taylor, C, **Hubbard, G** & Beeken, RJ (2022) 'Quality of life profiles and their association with clinical and demographic characteristics and physical activity in people with a stoma: a latent profile analysis', *Quality of life research : an international journal of quality of life aspects of treatment, care and rehabilitation*.
<https://doi.org/10.1007/s11136-022-03102-5>

Hunter B, Gorely T, Beattie M and Harris K (2022) 'How and Why should Realist Review be implemented within Sport and Exercise Psychology? Illustrating the method'. *International Review of Sport and Exercise Psychology*.
<https://doi.org/10.1080/1750984X.2021.1969674>

Muirhead, K., Macaden, L., Smyth, K., Chandler, C., Clarke, C., **Polson, R.** and **O'Malley, C.**, (2022) 'The characteristics of effective technology-enabled dementia education: a systematic review and mixed research synthesis.' *Systematic Reviews*, 11(1), pp.1-30.
<https://doi.org/10.1186/s13643-021-01866-4>

Schultz M, McGrogan C, **Beattie M, Macaden L, Carolan C**, Dickens G. (2022) 'Psychological First Aid for workers in care and nursing homes: Systematic review', *BMC Nursing*, 21, 96.
<https://bmcnurs.biomedcentral.com/articles/10.1186/s12912-022-00866-6>

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Meet our Research Staff

- [Neil Angus](#)
- [Dr Clare Carolan](#)
- [Professor Gill Hubbard](#)
- [Dr Michelle Beattie](#)
- [Professor Trish Gorely](#)
- [Dr Leah Macaden](#)
- [Marie Cameron](#)
- [Jonathan Gray](#)
- [Julie Munro](#)
- [Dr Nicola Carey](#)
- [Hannah Hollinger](#)
- [Robert Polson](#)

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