



School of Health,  
Social Care and  
Life Sciences

Sgoil na Slàinte,  
Cùram Sòisealta agus  
Saidheansan Beatha

## Welcome to the Spring edition of the new UHI Health, Social Care and Life Sciences Newsletter

Spring 2023 sees us emerging from Covid with a sense of renewal and a spirit of collaboration – our mission? - to address pressing health and social care challenges in the Highlands and Islands.

On Tuesday this week we celebrated the opening of the new £9.5m **Life Sciences Innovation Centre** - a collaboration between UHI and Highlands and Islands Enterprise. UHI Health and NHS Highland will co-host a session on Healthcare Innovation and Entrepreneurship at the **NHS National Education Scotland Virtual Conference** 27<sup>th</sup>- 28<sup>th</sup> April.

Colleagues from EO Health, UHI Inverness and UHI Perth joined forces to evaluate **Black Isle Brewing Company's Volunteer Scheme**. This Interface funded project evidenced the positive mental and physical health benefits of connecting with nature to increase biodiversity and sustainable organic food production.

Researchers in biomedical science have joined forces with CRUK and Melanoma Focus on the **My Melanoma** project which leverages digital technologies to improve the quality of life of patients with a melanoma diagnosis. This is supported by colleagues of Dr Sharon Hutchison, a member of our UHI Health research group who sadly died of a melanoma at the end of December 2017.

An exciting international initiative to improve mental wellbeing has also been launched. This RSE funded collaboration between Haiyang University's Department of Medical and Digital Engineering, South Korea sees UHI Health researchers with interdisciplinary expertise in Nursing, Music, Geography and Sociology embracing VR technologies. This follows on from our ground-breaking and much cited 2018 research into **Virtual Reality and Mental Health** ([Head-Mounted Virtual Reality and Mental Health: Critical Review of Current Research](#)). And a further collaboration between UHI Health and Alzheimer's Society sees a new doctoral student exploring the benefits of Music and Movement to improve the lives of those living with Dementia.

And congratulations go out to Nicola Carey who was inaugurated **Professor of Health Services** on 7th April!

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We do hope you enjoy the Spring issue. If you have any stories for the Summer Edition or want to open a dialogue and collaborate, please contact the Communications Group at [mark.grindle@uhi.ac.uk](mailto:mark.grindle@uhi.ac.uk).

### [Dr. Mark Grindle](#)

#### **Senior Lecturer in Digital Health**

*This newsletter is a collaboration between colleagues across UHI Health, Social Care and Life Sciences*



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## **New Life Sciences Innovation Centre opens on Inverness Campus**

The £9.5m Life Sciences Innovation Centre on Inverness Campus is the result of a collaboration between Highlands and Islands Enterprise (HIE) and the University of the Highlands and Islands (UHI). The development has been supported with funding from the Inverness and Highland City-Region Deal and the European Regional Development Fund.

HRH The Princess Royal, UHI's Chancellor, toured the new centre and unveiled a plaque at a celebratory event on 18<sup>th</sup> April. She was joined by over 100 invited guests, including Professor Sir Jonathan Van-Tam, former Deputy Chief Medical Officer for England and now Pro-Vice Chancellor at the University of Nottingham.



The centre will attract more life science companies to the region and encourage collaboration between academic researchers, industry and the health sector, supporting the development of new products, processes and services to improve healthcare. Designed by Austin-Smith:Lord and built by Robertson Construction, it offers flexible laboratory and office space and provides access to specialist equipment and resources.

For more information on the Life Sciences Innovation Centre, visit [www.invernesscampus.co.uk/business-premises-and-land/lsc](http://www.invernesscampus.co.uk/business-premises-and-land/lsc)

## **UHI Researchers visit South Korea**

The RSE Scotland Asia Partnerships Higher Education Research Fund is a new grant scheme funded by the Scottish Government aimed at developing new, as well as enhancing and adding value to existing international research partnerships between Scottish universities, research institutes and partners in Australia, India, Japan, Pakistan, South Korea, Singapore and the Association of Southeast Asian Nations (ASEAN).

This award is called SAPHIRE for short.

A team of rural health researchers from the University of the Highlands and Islands were awarded SAPHIRE funding to visit Professor Jin Yong Jeon, Head of the Department of Medical and Digital Engineering, Hanyang University, Seoul, South Korea.



Professor Jin Yong Jeon is an international expert in acoustic engineering and has applied his expertise to develop and test Virtual Reality natural soundscapes. His team of half a dozen PhD students work in the lab to develop VR nature soundscapes and then test their effects on psycho-physiological parameters including mood, heart rate variability and neurological patterns.

They have recently created a unique lab to test the effects of VR natural soundscapes on young children with ADHD.

During the visit, Scottish researchers tried the equipment in the lab and visited a local park where Professor Jin Yong Jeon's team have filmed and audio recorded natural images and sounds

Professor Gill Hubbard who led the Scottish research team said,

“Coming to South Korea has given us first-hand experience of VR natural soundscapes. We will use our learning from this visit on our return to Scotland to develop VR nature soundscapes to improve mental health in different groups of the population starting with higher education students.”

“The South Korean team are acoustic and digital medical engineers whereas the Scotland team are social scientists. We therefore draw on very different subject disciplines that will help us to fully understand why VR natural soundscapes have the potential to help people de-stress and improve their mental well-being.”



## Regenerating Nature is Good for your Mental Health

Researchers from UHI teamed up with the Black Isle Brewing Company to evaluate the mental health benefits of their new volunteer scheme. The initiative was set up by Black Isle Brewing Company to increase sustainable organic food production in the local community during the pandemic. The ethos at the core of the scheme is to grow seasonal herbs and veg, increase biodiversity, and regenerate nature.

The research, funded by Interface, uniquely merged interdisciplinary expertise from across the UHI Partnership - Drs Mark Grindle (UHI Digital Health), Ewan Bowditch (UHI Inverness Institute for Biodiversity and Freshwater Conservation) and Ros Bryce (UHI Perth Centre for Mountain Studies) volunteered for the programme, using participant observation, film and photo diaries and depth interview techniques.

Working as part of a team, being immersed in nature, and sharing stories proved to be beneficial to participants' health: Improved mood, wellbeing, and sleep patterns were evidenced. But taking part in growing organic food and working to create a sustainable ecology to increase biodiversity provided participants with a sense of purpose and belonging.

Grindle who led the research said,

'We shouldn't need research to tell us that helping to end the nature depletion and climate emergencies is good for our health. But Knowledge Exchange case studies like this between the University and Industry remind us that improving mental health and the economy whilst regenerating nature is not just to be valued but is perfectly feasible'.



## MyMelanoma Project



MyMelanoma began when two patients approached us, expressing a wish to be more actively involved in research to improve the experiences and outcomes for other patients with a melanoma diagnosis. They believed their stories, biosamples, and life events could be better used in research to increase the scope and interpretation of the studies undertaken.

MyMelanoma is a result of this important conversation!

MyMelanoma will recruit in excess of 20,000 patients with cutaneous, acral or mucosal melanoma to answer the most critical questions in the treatment, management and quality of life of patients with a melanoma diagnosis.

We are leveraging the extensive everyday use of digital technology in conjunction with NHS clinical data and widespread participant support to build a very large research database, with the aim to revolutionise the way we undertake melanoma research. MyMelanoma is specifically designed to have minimal NHS clinical input, as very large-scale studies cannot depend upon these crucial front-line workers to recruit and supply data.

[A/Prof. Antonia Pritchard](#) (Division of Biomedical Sciences, UHI) is an integral part of the MyMelanoma team and is leading the study arm focused on the genetic susceptibility to melanoma. This study will investigate factors modifying known genetic risk, identify novel gene variants that confer susceptibility and how combinations of genetic variants influence risk. Importantly, we have ethical approval to refer participants for genetic counselling if we identify clinically actionable variants.



We are grateful for support from CRUK, Melanoma Focus and from colleagues who raised funds in memory of Dr Sharon Hutchison, a member of our UHI research group who died of a melanoma at the end of December 2017 (<https://www.justgiving.com/fundraising/antonia-pritchard>).

All information on MyMelanoma can be found at our website: [www.mymelanomastudy.org](http://www.mymelanomastudy.org) and this is where participants can sign up – please spread the word!

## World Optometry Day 2023



UHI Department of Optometry celebrated World Optometry Day, March 23rd. With the theme **"Expanding Optometry's Role - The Time is Now!"**, the World Council of Optometry advocates for stronger global access to eye care and to ensure that optometrists around the world have the education and skills to thrive and contribute within their respective healthcare systems. Recent resolutions of the World Health Assembly and United Nations have adopted eye care targets that are ambitious, yet achievable, through a collaborative approach among all eyecare professionals. Research, Education, and Innovation in the department emphasises the increasing role optometry plays not just in eye care but as an integral part of the health care system.

## Healthcare expert awarded a Professorship

[Nicola Carey](#), Head of Department for Nursing and Midwifery, has been awarded a Professorship by UHI for recognition of her work in education, research and innovation.

Professor Carey is a qualified nurse with over 20 years' experience in teaching and developing curriculum in clinical and academic settings. She has helped to secure over £3 million in competitive research funding, has spoken at national and international conferences and is currently leading the development of a new MSc in rural advanced practice. She is Vice-Chair of the Association of Prescribers and a committee member of the International Collaboration for Community Health Nursing Research.



Professor Carey's research focuses on developing and evaluating innovation in clinical practice related to long-term conditions and workforce development. A recent project undertaken with colleagues at the Universities of Surrey and Strathclyde, Hospice Ethiopia, the Federal Ministry of Health and Hello Doctor, an Ethiopian based software company, developed an app to support patients needing end of life care in Ethiopia. It is hoped the app will be further developed and tested to support patients in several rural areas of Ethiopia, other African countries and Scotland.

Speaking about her new title, Professor Carey said: "I am thrilled to be awarded a Professorship in recognition of my national and international academic portfolio that serves to enhance nursing, healthcare practice and strengthens the emerging academic profile of the Department of Nursing and Midwifery, along with that of the School of Health, Social Care and Life Sciences."

## Music, Movement and Dementia

Jenny England has recently started a PhD project with UHI Rural Health and Wellbeing. Funded by Alzheimer's Society, Jenny will investigate whether imitative movement combined with personalised song provision can contribute to communication skills and quality of relationship in dementia caregiving dyads. She will work in rural Scotland and Italy. Jenny is supervised by [Prof. Sarah-Anne Munoz](#), [Dr Ania Zubala](#) and Dr Leah Macaden.

## Inverness and Highland City-Region Deal Health and Life Sciences Innovation Fund

UHI is pleased to announce a call for applicants to our Health and Life Sciences Innovation Fund, provided as part of the Inverness and Highland City-Region Deal project. The aim of this funding is to foster collaboration and partnership between the university and public, private, and/or third-sector organisations in health and life sciences. Eligible projects include applied clinical and life sciences research, proof of concept studies, and evaluation studies that address clinical, academic, and commercial stakeholder needs. Project activities can include the development, evaluation, support and implementation of new products and services, businesses, or clinical service improvements, and should clearly articulate their benefits for the Highland region. All projects will be considered based on a cost-benefit evaluation, to ensure the support provided is realistic, achievable, and likely to deliver value for money.

Applications will be assessed according to the following criteria:

- Projects address clear, well qualified health or life sciences needs or demands
- Projects are realistic, feasible, and achievable for the budget and resources requested
- Projects align with and utilise university and external resources in a collaborative manner
- Projects demonstrate the opportunity for real-world impact and provide benefit to Highland

To discuss your project ideas before submission and establish their eligibility for consideration, please contact [cityregiondeal@uhi.ac.uk](mailto:cityregiondeal@uhi.ac.uk) or [innovation@uhi.ac.uk](mailto:innovation@uhi.ac.uk).

Several examples of recent successful Inverness and Highland City-Region Deal projects are noted below:

New product	Healthcare improvement	New start company
<i>A novel natural antibody-based therapy for liver cancers</i>	<i>Post-stroke atrial fibrillation monitoring and treatment</i>	<i>Devices to support people with chronic mobility issues</i>
  (QHB Ltd)	  Daiichi-Sankyo	  (Person Centred Solutions)
	 	 (2022 runner up) 

## Interprofessional Education Event

On the 21<sup>st</sup> March the Department of Nursing and Midwifery welcomed our year one Western Isles Nursing students and some year two/three Optometry students to an Interprofessional Education event and social gathering at the Centre for Health Science in Inverness along with our year one Highland nursing students. The students discussed the commonality between their roles and their favourite parts of these roles. Catherine MacRobbie, a medical illustrator, provided an excellent anatomy body painting session, and the students enjoyed a walk in the late afternoon sun and some social shared pizza and chat time to get to know each other and exchange stories. We hope to do more of these events in the future.

*Anna Macauley, first year student nurse based in Stornoway tells us about her trip -*

13 of us took a trip to join our fellow peers, who in normal circumstances we only see their names on a screen during our online classes. It was daunting going into a room with so many people we do not know. We were warmly welcomed after much planning from our lecturers. The lecture was good and we enjoyed sitting with our fellow peers who are normally over 200 miles away from us. After our lecture we chatted with our peers about what is important to us as students in becoming nurses. It was interesting to hear that so many had the same or similar views. We also discussed what our fears of becoming registered nurses are, which we all shared. It was nice to know that these feelings and views were not just had by us but that our peers on the mainland campus felt similar. It was nice to have our TUMAD (The Undergraduate Mile a Day) walk and see a different side of Inverness and get to know our lecturers. On Thursday, despite being 5 minutes late as breakfast from McDonald's was essential, our lecture was very interesting. It was a nice change from being behind a screen and learning face to face. Personally, I feel I learn better from face-to-face. Sadly, we missed the afternoon seminar as we had to grab lunch and head back up to Ullapool to get the ferry back to Stornoway. We were pleased the weather forecast was on our side and the ferry got us over and home. We are very grateful to our lecturers for organising the trip.



## Hernia Active Living Project Developments



The research team involved in the Hernia Active Living Project (HALT) led by [Professor Gill Hubbard](#) (Department of Nursing and Midwifery) have finished the project and share a summary of findings. The outcomes from this work have led to the development of new streams of work looking at the management of parastomal hernias for people living with a stoma. The work involves people with bowel and rectal cancer, and those with inflammatory bowel disease who have a hernia/bulge as a complication of their stoma surgery.

**Background:** Parastomal bulging/hernia is a common complication of having a stoma. Using exercise to strengthen the stomach muscles may be a beneficial self-management option for some patients, and avoids the need for further surgery. The aim of this project was to test a Pilates-based programme for people with a parastomal bulge.



**Participants:** Adults with an ileostomy or colostomy with a bulge or diagnosed hernia around their stoma were asked to take part. A programme was created and tested in 17 people, and then 19 people in a feasibility randomised controlled trial. The intervention involved a booklet, videos and up to 12 online sessions with an exercise specialist. We examined trial fidelity, adherence, and acceptability. We also asked

**LEVEL TWO**

### Exercises

Hip Twist (with option of ball between knees)  

We did this in Level 1 by dropping one knee to the side. This time both legs will move together.



(a) Knees bent (b) Knees to one side

1. Lie on your back with your arms by your side and knees bent (image a).

questions on quality of life, and about confidence to exercise. We interviewed 12 people who took part to get their feedback on the programme.

**Results:** 19 out of 28 people completed the programme (67%), and received on average 8 sessions, lasting a mean of 48 minutes. Participants who received the exercise intervention perceived physical improvements such as reducing the size of parastomal bulging, weight loss, core strengthening, core control, improved posture, and less need for support garments due to better core control.

**Conclusions:** People found exercise programme was acceptable, it was safe to deliver and potentially helpful to them.

As a result of this project work the HALT team have gone on to further work in this area:

- The project exposed a need in this patient group for formal guidance and information on exercises that are safe and beneficial while living with a hernia. Sarah Russell from the Ostomy Studio is working in conjunction with the Association of Stoma Care Nurses (ASCN), and a specialist physiotherapist to develop formal guidelines for patients living with a parastomal hernia. Julie Munro (UHI Dept of Nursing and Midwifery) is part of the project team to develop the exercise recommendation guidelines for the NHS and ASCN.
- Parastomal hernia patients are advised to do core exercise work to help limit the progression of their bulge. There is a lack of data regarding the physiological changes that occur in this patient group when exercising. Julie Munro is working on a project as part of her PhD work funded by UHI, to examine the abdominal wall of parastomal hernia patients. She is addressing following question: Do physiological changes occur as a result of a Pilates style core exercise programme in stoma patients? The project will use ultrasound measures and recruit 10 patients into an 8 week exercise programme. This is a collaborative project involving Harrogate and District NHS Foundation Trust.

## Knowledge Exchange Activity

A bid to engage the public in dialogue on the future of rural health and care services was submitted to AHRC by Sarah-Anne Munoz, Gill Hubbard, Janet Heaton, Mari Todd, Andrew Jennings and Lyn Anderson. It would allow us to work with communities in Inverness and Shetland on this topic. We are also hoping to submit a bid to the Ideas Fund to support knowledge exchange activity across the Highlands and Islands relating to mental wellbeing. Anna Paaso from the KE team is supporting this.

## Researchers in the Department of Nursing & Midwifery, UHI and health psychologists, University of Aberdeen are collaborating with NHS Highland and Grampian public health teams for rapid impact

The pandemic highlighted the importance of behavioural science for population health but exposed lack of established collaboration between academics and public health (PH) agencies. In the United Kingdom, PH agencies used internal government polling and rapid turn-around focus groups to inform policy and practice during the Covid-19 pandemic. Did *academic* behavioural science research also inform PH policy and practice? The answer of course is yes but there is room for improvement if the aim is to have *rapid real-time* impact



Building on connections made during the pandemic, the CHARIS (Covid-19 Health and Adherence Research in Scotland) behavioural science team are now collaborating directly with their counterparts in two NHS PH agencies in the North of Scotland to test a sustainable model of more effective methods of joint working. Since starting in October 2022, three PH challenges are being addressed: flu and Covid-19 spread by encouraging people staying at home if they have flu or Covid-19 symptoms, uptake of bowel screening, and health behaviours while waiting for treatment. The pilot study will evaluate steps for rapid impact and assess if PH partners find the process useful and identify the barriers and facilitators for rapid impact.

Unless a sustainable method of joint working can be established in times where there are no urgent PH priorities, it is unlikely that the fruits of behavioural science can be aligned with PH challenges when outbreaks are happening to *rapidly* impact population health.

[Prof Gill Hubbard](#) and [Dr Michelle Beattie](#)



## The First Steps

February was an exciting month in [Kyleakin Connections](#) (KC). The Nice Café reopened after 3 years of closure, and a new project was announced. The project will explore how the use of Makaton and re-design of KC well-being garden can support community engagement and subsequently mental well-being. This project will actively involve the service users at KC as co-designers and collaborators in this research. It will be supported by the staff at KC and two researchers from the University of the Highlands and Islands, [Prof Gill Hubbard](#) and [Dr Megan Dickson](#).

The first phase of the project is focused on relationship building between researchers, services users and staff at KC. This month I (Megan) made my first visit to KC. I was drawn to the project because of the beautiful location of KC and my passion for building stronger communities.

On the first day of this visit, KC opened their 'Nice Café and bookshop which have been closed for three years (as a result of COVID-19). There was an energetic buzz in the air as service users and staff prepared to welcome customers back into their café space. To encourage community members to learn and use Makaton, the Nice Café now has a Makaton sign of the day. One highlight of my trip was seeing customers learning the Makaton sign for 'tea' from services users and practicing it. On the second day of the visit, the service users and staff were trialling a new digital cash till that has been purchased for the Nice Café. The tills functions are being adapted to make them accessible and user friendly for all those who work in the café. This will hopefully increase the number of service users who can manage the till from two to eight.

At the end of my visit, we planned our first research project with the service users and staff. We developed a research question: 'Is our café similar or different to other cafes in the area?' and the service users selected different tasks to complete that would help answer this question.

We are still at the early stages of this project and have a lot to learn from one another. However, I left the Isle of Skye feeling a sense of excitement and gratitude that I get to return and spend more time with the KC community.

*Written by Dr Megan Dickson - Researcher based at University of the Highlands and Islands  
The project mentioned above is funded by the [Ideas Fund](#).*



## Perinatal Mental Health

We hope that there may be a small amount of funding next year to support work on a perinatal mental health peer research project in Moray. The charity we are working with are particularly interested in supporting an early career researcher or doctoral researcher. [If you're potentially interested, contact sarah-anne.munoz@uhi.ac.uk](mailto:sarah-anne.munoz@uhi.ac.uk)

## 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 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 Mark Grindle](#) for informal enquiries.**

## Events

### **NHS National Education Scotland Annual conference on collaboration for improvement, 28 April 2023**

Following on the growing success of the 2022 conference, NES is delighted to confirm that it will once again be hosting the conference virtually over two days in 2023. This event is for colleagues from all professional disciplines across health and social care with an interest in education and training, workforce development and digital solutions. There is no charge for attendance.

As part of the conference, UHI and NHS Highland are co-hosting a session on Healthcare Innovation and Entrepreneurship. This will be an introduction to healthcare innovation and entrepreneurship, and the role these activities can play in designing, developing, and delivering high quality care that addresses health and social care challenges present throughout the NHS and private care sector. Participants will gain an understanding of the process of identifying designing, developing, evaluating, and implementing new healthcare innovations, and how engaging with these activities can complement their existing roles. Aspects of regulatory, legislative, and governance compliance will also be addressed, as well as IP protection and commercialisation.

[NES Events](#) | [NHS Education for Scotland](#) | [NES Annual Virtual Conference 2023 - Collaboration for Improvement](#)

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