



## Institute for Health Research and Innovation

### *Research Strategy 2021-28*

#### Summary

**Strategic Goal:** Excellence in research to improve health and wellbeing, fuelling economic growth

**Key Objectives:** To deliver world-leading research in a collaborative, fair and supportive environment

**Key Performance Indicators:** Increased grant capture, more world-leading outputs and genuine impact to rural healthcare and regional health sector growth

#### **Purpose**

This document sets out our aims, objectives and strategy for the forthcoming REF census cycle. The document includes performance indicators and key considerations.

#### **Review**

The strategy is expected to evolve in response to changing priorities and opportunities. Formal review will take place every 3 years, but there will be interim reviews on an annual basis. The Institute for Health Research and Innovation steering group will undertake the reviews.

#### **Background**

The Institute for Health Research and innovation (IHRI) is the research and innovation component of the School of Health, Social Care and Life Sciences. Teaching within the School is delivered through the University-wide Applied Life Studies Subject Network and the Department of Nursing and Midwifery (Inverness and Western Isles). IHRI staff members are distributed across three broad entities within the School: The Department of Nursing and Midwifery, the Division of Rural Health & Wellbeing and the Division of Biomedical Sciences. The interdisciplinarity of the units is fundamental to IHRI, with an emphasis on mixed-methods approaches to research in order to extract maximum benefit from complex clinical studies and public health interventions. This aligns with the University's mission to have a "transformational impact on the prospects of our region, its economy, its people and its communities". While IHRI's primary remit is

to the Research Impact Pillar of the University’s Framework, it will also contribute significantly to the Enterprise Pillar and to Tertiary Education through Research-Teaching linkages.

IHRI boasts a membership of ~90, of whom 26 are independent researchers, with the balance composed of research assistants, technical staff, visiting and honorary research appointments and postgraduate research students. The membership is drawn from across the University’s Academic Partnership, with the hub located at the Centre for Health Science in Inverness. IHRI’s mission is “to conduct world class research and innovation leading to tangible improvements in remote and rural healthcare in this region, which are exportable to rural communities worldwide”.

### Research Themes

Figure 1 illustrates our research themes, together with the pipeline to tangible impact, utilising the strengths of the University’s relationship with HIE, industry and the NHS. The unique characteristic of our University is its distributed nature across the entire Highlands and Islands, ensuring close links with remote, rural communities. Accordingly, much of our research involves rural community engagement, be it associated with co-production of health service solutions through implementation science, with novel digital interventions, or through health education and physical activity programmes for re/pre-habilitation. Pedagogical research in the context of healthcare workforce education is led by Smith and Macaden, while Biomedical Sciences research aligns with the needs of the emerging local cluster of health-related SMEs and multinational healthcare companies, with specialist knowledge in key areas: Free Radical Biology & medicine, Genetics and Immunology (and schizophrenia, liver cancer, melanoma), Biomarker Discovery and Systems Biology, and Medical Nanotechnology.

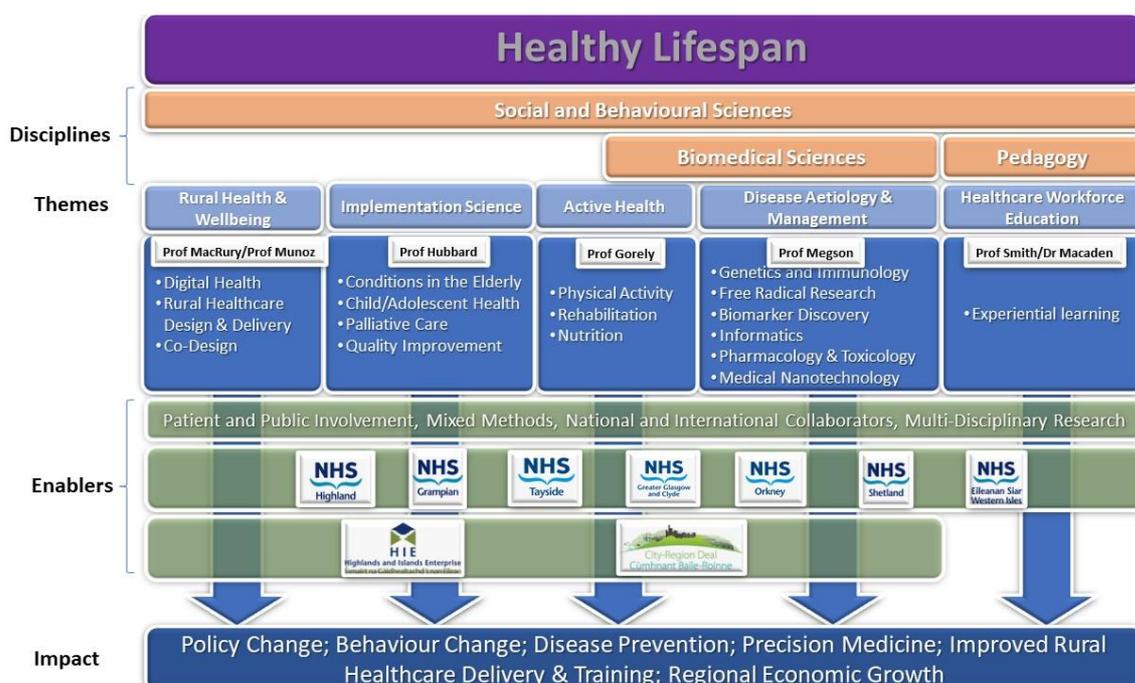


Figure 1: Research disciplines, themes, enablers and impact in IHRI

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## Structure

IHRI is the research and innovation component of the School of Health, Social Care and Life Sciences. Teaching within the School is delivered through the University-wide Applied Life Studies Subject Network and the Department of Nursing and Midwifery (Inverness and Western Isles). IHRI staff members are distributed across three broad entities within the School: The Department of Nursing and Midwifery, the Division of Rural Health & Wellbeing and the Division of Biomedical Sciences. The interdisciplinarity of the units is fundamental to IHRI, with an emphasis on mixed-methods approaches to research in order to extract maximum benefit from complex clinical studies and public health interventions.

IHRI constitutes one of four University research clusters that represent the institutional mechanism for a cohesive research and impact strategy across a region that is the size of Belgium, with a population similar to that of Edinburgh. A fundamental principle underpinning the University's research clusters is the unique need in this University to embrace and overcome the geographical boundaries presented by the region's geography, and to facilitate cohesion amongst researchers with common interests, irrespective of their location in the Highlands and Islands. IHRI fully embraces this philosophy, with researchers from the regional centres of Inverness and Perth joined by those in the remote Western Isles, Orkney, Shetland and Moray. The insights and experiences of researchers who live in the very communities that rural healthcare serves are key to ensuring needs-driven impactful research and innovation. These established links with our rural communities are essential in building trust amongst the research population.

## Strategic Goal

Excellence in research to improve health and wellbeing, and to fuel economic growth of health and life sciences in the region.

## Aims

To foster a world-leading research community in the Highlands and Islands and to build collaborations nationally and internationally in order to carry out research, knowledge exchange, commercialisation and consultancy activities that help to improve the physical and mental health and wellbeing of people living, working, or spending time within, remote and rural communities regionally, nationally and internationally. In so doing, our research will deliver socio-economic benefits to the region through improved population health, reduced healthcare costs, improved patient safety and growth of a health innovation cluster, with academic excellence at its core.

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## Objectives

- To deliver high quality, interdisciplinary research that drives improvements in rural health and wellbeing and biomedical sciences, nationally and internationally.
- To provide research leadership to design effective solutions to key local and international health and social care challenges.
- To collaborate with multi-sector professionals within the region to conduct and implement research, leading to sustainable excellence in health and social care services, as well as innovative solutions to identified needs within the health sector.
- To undertake rural health research that actively involves rural residents, healthcare professionals, third sector representatives and policy makers within all stages of the research process.
- To build and maintain research capacity and promote equality within research teams.

## Publications

To continue to generate world-leading, peer-reviewed publications that herald the instigation and implementation of developments resulting in tangible socio-economic benefits for the region and the communities therein.

## Learning and Teaching

- To lead CPD and post-graduate learning and teaching activities in rural health and wellbeing and biomedical sciences that are relevant to both researchers and practitioners.
- To support the development of rural health and biomedical sciences research through the provision of a positive environment for doctoral students and post-doctoral researchers to develop knowledge, skills and experience.
- To improve Research-Teaching linkages through increased integration of researchers and research projects into undergraduate delivery

## Impact

To raise awareness of our research, its findings, and its implications for rural areas through engaging in dissemination activities with academics, practitioners, policy makers and the public

To undertake activities that generate positive social, cultural, economic and health impacts in remote and rural communities

To inform policy that improves health and wellbeing in our region by way of a model for rural populations worldwide

To generate intellectual property leading to licences, spin-outs and start-ups to help build the health cluster in the region

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To lend our research excellence to regional, national and international companies in order to add value to existing IPR

## **Performance Indicators**

### ***Outputs***

Research staff will publish high quality (REF 3/4\*) articles in peer reviewed journals. Individuals will have their own personal targets, but the expectation is that **at least three papers per annum** are published at this quality threshold per FTE (pro rata for part-time staff and individuals with restricted time allocation for research).

### ***Income***

We will increase our overall grant capture; income for period 2014-2020 was £10.2m, excluding income from Nursing and Midwifery prior to transfer from Stirling. The target for the upcoming REF cycle is **£15m**. There is also an expectation that income will diversify, reducing reliance on Scottish Funding Council and Highlands and Islands Enterprise. At the same time, diversification will be expected to plug the gap left in the wake of loss of major infrastructure funding via the EU.

### ***Students***

Post-graduate **research student numbers will be maintained at 20-25** across the Institute, with an increased emphasis on MRes provision.

### ***Intellectual Property***

While our open innovation model is not focused on IPR, there is still the likelihood of generation of intellectual property from our staff and students. A realistic target for IPR protection is for **one new patent application to be submitted per annum**.

### ***IPR Licensing/Commercialisation/Sale***

Given the small number of patents currently in our portfolio, the target for licensing/commercialisation/sale of IPR is restricted to a nominal **10% of the number of patents applied for**, with the Inverness and Highland City Region Deal (IHCRD) acting as the vehicle for these outcomes. This is recognized to be an ambitious conversion rate for intellectual property.

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### ***Impact and benefits realisation***

Interim targets: we have a number of interim targets built-in to the IHC-RD and ERDF funding. These are:

**25 service improvements**

**10 spin-outs, start-ups or inward investments**

**15 assisted companies**

**10 new devices or services**

These interim targets are supplemented by tangible benefits realization targets that must also be met. Specifically, these targets include:

**65 FTE jobs**

**£35k income per FTE**

**£6.3m turnover**

**£3m per annum GVA**

### ***Making it happen***

We will contribute to Scotland as a health research nation. To achieve this, we need people, partnerships, an enabling research environment, and financial sustainability.

### ***People***

- *Attract, reward and retain the best researchers*

We will reward success by directing research resource to those who deliver outputs towards the strategic goals. Use of the performance indicators will take account of performance expectations for people at different stages of research career. Rewards may include expenses for attending training courses, conferences and pump-priming for new research ideas.

- *Promote equality*

We will adopt the principles of the Athena SWAN charter within our policies, practices, action plans and culture and support UHI with the recent Athena SWAN charter bronze award. We will tackle all discriminatory treatment of people.

- *Promote collaboration*

We will introduce peer review to foster high-quality research. Peers will provide constructive feedback on research proposals submitted for funding. We will build strong teams to deliver research together within

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the Department. This collegiate approach to research will extend to all of our colleagues within the School of Health, Care and Life Sciences when it is relevant and appropriate to do so.

➤ *Research-teaching linkages*

The research and teaching activities will be closely intertwined and ‘jointly produced’. As the sole provider of undergraduate nurse education in the Highlands and Islands, we will have a direct influence on the future generation of nurses in the region. Our students will be competent in accessing and using high-quality research evidence to inform their practice. Our pedagogical research will inform how our students are taught. Researchers within the Department conducting pedagogical research will collaborate with the Learning and Teaching Academy at UHI.

### **Partnership**

Our success in achieving research excellence depends on people who can work in partnership with others to deliver high quality research that will impact health and wellbeing. We will therefore:

➤ Foster a culture of partnership working and collaboration

Our proposed collaborations will include other academic research organisations (e.g. Centre for Healthcare Randomised Trials (CHaRT) at the University of Aberdeen and University of Stirling Health and Behaviour Research Programme), local health and other public sector service providers (such as social care, education and leisure services) and the public. Innovation projects will include collaborations with industry, 3<sup>rd</sup> sector organisations and engagement with other key stakeholders (NHS Boards, Highlands and Islands Enterprise)

Together with these partners, we will conduct interdisciplinary research to identify and solve key problems affecting the health and wellbeing of people in our local communities, Scotland and beyond.

➤ Foster Patient and Public Involvement (PPI) in research and create a nexus for research excellence *with* and *for* people in the Highlands and Islands

Researchers across IHRI will foster PPI in research in the Highlands and Islands so that our research is directly relevant to our local partners and the public. We will host public engagement events and consult widely to achieve this. We will engage the public in our research from start to finish. That is, we will work with the public in setting research priorities, conducting research, and in disseminating the findings of the research to key audiences including policymakers, service commissioners, practitioners and the public.

### **Environment**

➤ *Create space for partnership working and collaboration*

We are fortunate that we work in buildings that has open spaces for teamwork. The Centre for Health Science, for example, is located adjacent to Raigmore Hospital and NHS strategic services such as the Directory of Public Health, and Health Improvement. This proximity facilitates research connections between the department of nursing and rural health researchers and NHS professionals.

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The Centre for Health Science building also hosts a library specializing in health. Library and information specialists ensure that the researchers access the right information at the right time and so that we have a global footprint by supporting the dissemination of our research.

The Highlands and Islands is the most remote and rural region in the UK and UHI is based in this region to serve the geographical population. Our research uses state-of-the-art information technologies (e.g., video conferencing, podcasts) to surmount geographical barriers to partnership working. UHI has a robust IT infrastructure to support partnership working. In addition, IT specialists will play a key role in supporting digital health research conducted within the School of Health, Care and Life Sciences.

➤ *Ethical research and excellent governance practices*

Our research will be delivered in accordance with legislation (e.g. data protection act), and research council and NHS research and ethical guidance. The Grants and Contracts staff are essential to our delivery of quality assured, ethical research and we will work closely with them so that we undertake entirely auditable and transparent research conduct. Governance processes will comply entirely with legislation and supplementary guidelines and close attention will be paid to changing regulations associated with data protection (information governance) and medical devices in particular. **This is an area of enormous importance in terms of risk mitigation and we will work closely with the University's senior management team to ensure sufficient resource is dedicated to this task in order to fully meet our legal obligations in this regard.**

➤ *University values and research integrity*

All of our research will comply with the university values policies, as well as with the research integrity code of practice. New members of staff will be introduced to these policies at induction and existing members will have these values refreshed at regular intervals. In addition, our staff members will be invited to contribute to updates in the values policy, given that this is an evolving document that requires frequent updating to keep pace with new risks in this regard.

### **Financial sustainability**

Our research ambitions will be supported by the provision of both successful competitive grant funding for research projects and programmes and strong investment from the University. This 'dual support' system is essential and mirrors the way in which UK governments invest in research (Stern 2016). We will therefore:

- Connect with key funders who have a commitment to funding research that aims to improve health and wellbeing. This will include UK government departments, research councils and charities
- Align our resources with our research strategy
- Invest Research Excellent Grant income in our researchers and resources
- Undertake an annual assessment of our income generation from our research activities

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There is also a perceived need to **consolidate our team around fewer disciplines** and themes to help increase critical mass, long-term sustainability and international recognition of our fundamental strengths.

Research funding governance is essential and the Principal Investigators (PIs) as budget-holders take responsibility for research study budgets. The University's finance team is essential to making sure that research income and expenditure for each research project is transparent and auditable to research funders, the public and for REF.