

<p><b>Institution:</b> University of the West of Scotland</p>
<p><b>Unit of Assessment:</b> 3</p>
<p><b>a. Context</b></p> <p>The University is committed to applied and near market research which positively impacts on human health. Substantial investment and strategic appointments (REF5) have established the <i>Institute of Biomedical &amp; Environmental Health Research (IBEHR)</i>, including the <i>Healthcare Policy and Practice (HPP)</i> research grouping, as primary vehicles to progress an impactful applied research agenda. UWS programmatic research integrates biomedical sciences, healthcare and public health environments. Our applied interdisciplinary research addresses a range of common health related risks (e.g. land contamination and risk to human health) and prevalent conditions associated with human health, ageing and disease (e.g. visual impairment and contact lens usage, arthritis).</p> <p>Our approach to external engagement and implementation has been driven by external drivers in policy and economic development relevant to the range of activities underpinning the component research groupings in musculoskeletal sciences, environmental research and healthcare policy and practice.</p> <p>UWS has long term associations directly with the NHS, the pharmaceutical and health care industry, and more widely in the business community, economic development groups, through to local government and policy review. The reach of our research impact beyond academia is reflected in our experienced track record of successful KTP projects as well as specific industry focused activities, collaborating across UWS with relevant research groups and working with some of the largest multinational organisations (e.g. Stemcor Ltd, Tata Steel) as well as nurturing activities with SMEs and community based organisations.</p>
<p><b>b. Approach to impact</b></p> <p>The UWS impact strategy has drawn on our key strengths from RAE 2008. The case studies are borne from the <i>IBEHR</i> commitment to research and knowledge transfer with potential to influence policy and practice; the impact of which has arisen through targeted support for emerging researchers. Dissemination strategies include publications in both scientific and professional journals, papers at international scientific meetings and a spectrum of public engagement activities. Our approaches extend across events and meetings that speak to a range of audiences including those tasked with strategic leadership, industry partners, practitioners and accessible events designed to inform and engage the public or end users of our scientific discoveries. To this end UWS is a founder member of the Glasgow City of Science. <i>IBEHR</i> and <i>HPP</i> projects take advantage of expertise beyond the immediate project team through establishing Peer Reference Groups and actively encourage dialogue with key stakeholders during project development, delivery and dissemination. The selected impact cases demonstrate our approach to optimising and where possible accelerating impact for the benefit of human health.</p>
<p><b>c. Strategy and plans</b></p> <p>The University strategy has been to establish Institutes with the capability to translate discoveries from the laboratory to human environment and healthcare studies. The establishment of <i>IBEHR</i> in 2012, signalled the University's commitment to research excellence with impact, and governed our strategic recruitment of new staff and their career development which has focused on reinforcing existing areas of <i>IBEHR</i> and <i>HPP</i> expertise.</p> <p>Strategic Research Funds within the University have already been invested to facilitate impact with our key stakeholders and nurture new research aspirations. <i>IBEHR</i> staff activity in KE through direct engagement with our stakeholder community has shown success in exceeding first year operating targets. The <i>IBEHR</i> management board includes members from industry, and has an associated Industrial Advisory Board.</p>

Furthermore, knowledge exchange projects have been developed by *IBEHR* and *HPP* staff, building on research projects and vice versa. The University's Research and Knowledge Exchange Board is also focusing attention on promoting research impact. We have established Subject Development Groups to promote the integration of research within teaching and learning to create an embedded research culture.

*IBEHR* supports studies at different levels of evolution, including investment in research programmes with significant future impact. For example, the programme of research investigating pathogenic mechanisms in arthritis led at UWS by Professor **Lockhart** has identified important new therapeutic targets. We are part of a consortium which recently secured a £1.2million programme grant to investigate one such key target, proteinase activate receptor-2, and while this work is currently at the pre-clinical stage, it holds significant promise for future clinical impact. A current *HPP* study is investigating the potential for continued employment post dementia diagnosis. This two year project funded by the Alzheimer's Society, and led by Professor **Banks**, is the first in the UK to explore the interface between early diagnosis for people with dementia and longer working lives. The findings will inform future policy relating to employment for disabled people, a key area for the UK and Scottish Governments.

We critically reviewed pre-*IBEHR* approaches to partnership working and introduced a user involvement strategy. Across the range of our research activities we proactively nurture meaningful research partnerships with local authorities, NHS, third sector organisations, government and international organisations and where relevant develop teaching programmes which engage with relevant professional groups (e.g. Royal Environmental Health Institute for Scotland (REHIS) / Queens Nursing Institute for Scotland). *HPP* is establishing a *Research for Practice Collaborative* with senior practitioners to build dementia research capacities and capability and promote translational studies.

In 2013 the School of Health, Nursing and Midwifery piloted an intensive Scholarly Writing Summer School for staff and post graduate research students to build confidence writing in high impact journals through to accessible writing for the lay reader. We have created an organising committee to plan and introduce an annual *IBEHR* summer writing school based on this pilot. We maintain engagement with academic and clinical networks (International Association of Gerontology and Geriatrics, SAGES) and in our support for new relevant developments. For example we have been involved in the preparation of the funding case to support the proposed Industrial Biotechnology Innovation Centre which involves direct input from REF submitted staff and will formulate our role in an integrated biotechnology initiative for Scotland with global outreach.

**d. Relationship to case studies**

The Case studies selected provide insight into the diverse approaches by which UWS promotes research impact by demonstrating the breadth of engagement with stakeholders and relevance of our research to policy and practice.

Case study 1 (**Henriquez**) provides an example of our focus on prevalent health conditions, and illustrates how UWS employs a successful partnership approach to development and formulation process, led by an *IBEHR* group leader. It demonstrates our breadth of activity from public engagement, industry links and professional body endorsement. Case study 2 (**Gagnon & Hursthouse**) demonstrates wider policy and governance impact with societal impact. This exemplifies our innovative approach to the effect of sustained engagement with major environmental issues from a human health perspective. There has been continuing incremental growth from core research returned in RAE 2008 and RAE 2001, and our commitment to engagement and partnership.

Together, the submitted impact case studies illustrate the breadth and integration of our impact targeted research, where synergistic projects enable staff to form and develop strong relationships with organisations through which they can achieve long-term impactful research.