

<p><b>Institution:</b> Glasgow Caledonian University</p>
<p><b>Unit of Assessment:</b> Allied Health Professions, Dentistry, Nursing and Pharmacy</p>
<p><b>a. Context</b></p> <p>The Unit has submitted five case studies that reflect impact beyond academia. The portfolio reflects the University's sustained and distinctive commitment to the common good. The case studies are underpinned by our curiosity driven research which stimulates collaboration and strategic research relationships; allows us to work in partnership with the health and social care professions, the public sector, and businesses; and to deliver economic and social benefit to these communities. Across the five case studies, the key non-academic beneficiaries include:</p> <ul style="list-style-type: none"> <li>- Health professionals, clinical service providers, and users across a range of health disciplines and specialities,</li> <li>- Local, national, European and international health policy agencies,</li> <li>- Industry, including global, large industry pharmaceutical and biotechnology companies through to small and medium-sized enterprises (SMEs) in the medical devices sector,</li> <li>- Wider audiences within the general public through exhibitions, conferences and media dissemination activities.</li> </ul> <p>Across the Unit's two research programmes in <i>'Managing and Living with Long Term Conditions'</i> and <i>'Promoting and Protecting Health and Wellbeing'</i>, research generates impacts primarily focused on improving health and wellbeing. Developing and testing a range of non-pharmacological and lifestyle interventions enables the Unit to definitively demonstrate outcomes for patient groups within thematic clinical areas as well as making public health advances for our national and international communities. Working closely with external partners has extended the Unit's impact by improving public engagement, raising public awareness of health risks, and demonstrating beneficial changes in lifestyle behaviour. Interdisciplinary teams of basic scientists and clinicians ensure research discoveries are translated into positive advances in care, clinical practice and research-informed policy that impacts positively on disease prevention and control. Working with SME partners has ensured that the research based development of new clinical technologies is successfully adopted within relevant healthcare markets. Up-scaling this to create company spin-outs from the University enables the Unit's research to lead to commercial impacts through new investments, revenue generation and new technology adoption in the pharmaceutical and biotechnology sector.</p>
<p><b>b. Approach to impact</b></p> <p>In order to develop and promote the impact of the Unit's research on health and well-being approaches have been adopted that have: increased and strengthened community engagement and strategic partnerships; brought the Unit's researchers closer to research users in clinical practice, communities, and businesses as well as policy and strategy groups; and developed and implemented techniques to promote, articulate, and benchmark our impacts.</p> <p><b>b.1 Community engagement:</b> the Unit boasts a vibrant multi-layered approach to community engagement partnership, to develop and implement research more closely with a range of research users and beneficiaries. The development of a Patient and Public Involvement working group (established 2011) resulted in the development of a User and Carer Strategy and the employment of a Service User and Carer Co-ordinator. This investment has successfully established Memorandums of Agreement partnerships with charities such as Quarriers. The Unit is working with the British Heart Foundation National Centre, the Long Term Conditions Alliance, the Scottish Government's Reshaping Care for Older People initiative and the Care Inspectorate Scotland on a series of events called Go 4 Gold, to celebrate activity in care homes (Skelton). Service users are now firmly embedded within the Unit's research processes to help identify, plan, evaluate and implement our co-created research (Pollock).</p>

**b.2 Direct involvement with health and well-being policy and strategy groups:** The Unit has strategically appointed, seconded or created new clinical-academic roles for academic staff with key stakeholders to ensure our research is articulated, translated and implemented within international health and wellbeing policy and guidelines. These include:

- **Expert policy bodies:** Recognising that changes in practice, clinical guidelines and policy feature highly in the Unit's impact roadmap, the Unit has supported and resourced staff to successfully engage with major organisations nationally and internationally. These include the World Health Organisation (e.g. Hagen, Hutcheson, and Scobie), the International Coalition for Active Aging (Skelton), The Scottish Government (e.g., Skelton, Howe, Flowers, Steultjens), the UK Department of Health (Donaldson and Reilly), the European Centre for Disease Control (Reilly), the National Institute for Clinical Excellence (e.g., Morgan, Godwin, Flowers), and the Scottish Intercollegiate Guidelines Network (e.g., Turner, Brady, Pollock, van Wijck).

- **Leading charities, learned societies, and educational bodies:** Engaging directly with these key stakeholders has enabled deeper involvement of users throughout the research process and towards developing pathways to impact for individual projects and larger programmes of research. Unit staff have been supported and resourced to work closely with leading charities including Arthritis Care (Steultjens, Hendry), Arthritis Research UK (Turner, Woodburn), British Heart Foundation (Skelton), the European HIV Community Steering Committee (Flowers) and the Visual Research Trust (Strang); in learned societies including the British Geriatric Society (Skelton), International Continence Society (Hagen), and; with allied health professions and associated professional bodies including the Chartered Society of Physiotherapy (Howe), and the Scottish Stroke Allied Health Professions Forum (Brady, Pollock, van Wijck); and educational bodies such as NHS Education for Scotland (Reilly).

- **Health service providers:** Working directly with health and social care service providers has facilitated rapid implementation of the Unit's research to beneficially change practice. This includes Healthcare Improvement Scotland's Community of Practice on Falls (Skelton) and HIV prevention (Flowers), and recent implementation of clinical-academic posts in NHS Greater Glasgow and Clyde as well as direct service provision in optometry (Simmers) and musculoskeletal health (Turner, Barn, Hendry, Woodburn).

**b.3 Development of strategic partnerships:** To maximise the significance and reach of the Unit's user and carer research, a partnership has been created with the Scottish Council for Voluntary Organisations (SCVO). This has enabled a full-time project co-ordinator to lead on the development and implementation of a strategy to embed user and carer involvement within current and future research, co-created at all stages of the process, and to facilitate knowledge transfer from research to policy, practice and service provision. The post-holder has developed a strategic stakeholder group which includes members from a variety of groups such as NHS Education Scotland, Scottish Social Services Council/Scottish Government, Carers Trust, Scottish Recovery Network, The Alliance, SCVO, Age Scotland, MECOPP (Supporting Ethnic Minority Carers), and Glasgow Disability Alliance.

**b.4 Approach to business and commercial impact:** Business and commercial impact is an emerging impact domain for this Unit and the approach has been to work closely with experts from the University's Department of Research, Innovation and Enterprise to identify new opportunities to commercialise technologies, products and services and to evidence reach and significance. In the future, strategic integration of life science and health research within the Unit will be promoted to increase commercial impact through the University's strategic focus on Knowledge Transfer Partnerships (KTP) and new models of partnership with business and the public sector. We will also emphasise exploitation opportunities arising from successes in large-scale EU projects (Scobie, Woodburn), research activity that has successfully brought SMEs into collaboration with the Units' researchers.

**b.5 Impact articulation:** Articulation and promotion of the Unit's research has been enhanced through close collaboration between investigators and experts in the University's Department of

## Impact template (REF3a)

Marketing and Communication with the appointment of a Research and Community Communications Officer. This activity includes creation of project-specific websites (<https://www.triad-cd28.eu/world-map.php>), targeted mass media through press and television (<http://www.bbc.co.uk/news/uk-scotland-glasgow-west-16952668>), and public events (including the introduction of public inaugural lectures for new professors and a University-wide Research Celebration event for the general public). The Unit has organised and participated in large-scale international events that deeply embed public awareness in the Unit's research. These have included the 8th World Congress on Active Aging (Glasgow, 2012) which involved 300 older adults, and the Orthopadie+Reha-Technik World Congress (Leipzig, 2013) which had a dedicated public open day. The Unit has seconded staff to important public engagement roles to raise awareness, including the Glasgow City of Science (Howe, Deputy Chairman) which has facilitated participation in major public exhibitions and events at the Glasgow Science Centre such as BodyWorks ([www.glasgowsciencecentre.org/bodyworks](http://www.glasgowsciencecentre.org/bodyworks)).

**b.6 Impact and staffing:** Staff support for impact activity within the Unit has been integral to staffing procedures, for example, promotions criteria and biannual Performance, Development and Review (PDAR) processes. These incentivise the concurrent delivery of research excellence in conjunction with research based community engagement and external partner work with key stakeholders (e.g. government bodies, policy makers, funding bodies, key charities and communities). This effectively embeds research impact activity within the Unit's planning processes.

**c. Strategy and plans**

The Unit will continue to develop and refine its proactive strategy for impact focusing on:

- 1) Extending the longstanding core mission and values of the University towards the common good which underpins the Unit's programmes of applied health research excellence,
- 2) Developing skills required by researchers to conduct impactful research,
- 3) Bringing together teams comprising academics; key partners, beneficiaries and end-users; business development and knowledge transfer managers; and marketing and communications experts to effectively bridge the academic - beneficiary gap,
- 4) Developing sustainable plans to incrementally enhance the depth of our impact,
- 5) Developing and resourcing methods to articulate, evidence and benchmark the reach and significance of the Unit's impacts on health and wellbeing locally, nationally and internationally.

**c.1 Overall strategy:** The Unit's overall strategy will prioritise the strongest areas of research excellence to develop a portfolio of research impact 'diamonds' – those most impactful areas of applied health research for the 'common good'. Support and resources will be strategically targeted to enable the Unit's researchers to identify and deliver likely impacts for our constituencies and beneficiaries. Particular emphasis will be placed on our priority impacts around improvements in health and well-being through research that successfully develops and tests new clinical and lifestyle interventions that have clear benefits to public health, disease prevention and control, improved outcomes, and changes in care practice, clinical guidelines and policy.

**c.2 Developing research impact skills:** The Unit will continue to prioritise research impact skills training for all of our researchers. The Unit will jointly work with the Graduate School to extend training for early career researchers promoting 'engagement, influence and impact' from the Vitae, Researcher Development Framework. The CREDO (Caledonian Research Excellence Development Opportunities) forum will continue to develop research impact training for contract researchers, principal investigators and research leaders. The Unit's Peer Review College will develop new processes to help principal investigators develop comprehensive plans to support the pathway to impact strategy made at the application stage of external grants and commercialisation activities.

**c.3 Developing and enhancing relationships with key partners, beneficiaries and end-users:** The Unit will continue to identify the key beneficiaries and users of research to develop long-term,

sustainable relationships. This will be achieved by embedding stakeholders in our Institute for Applied Health Research Steering Committee to contribute to strategy and policy development around impact; and by extending interface activities through increasing clinical-academic appointments and engagements at all levels in the health and social care communities. The Unit will increase secondments within relevant sectors with a particular focus towards industrial and commercial partners as the Unit's KTP portfolio increases. Central to our core mission we will engage with the University's Social Innovation Network to bring together academics, practitioners, policymakers, citizens and other stakeholders to collaborate on projects or funding bids that drive impact in health and wellbeing, extending current constituencies to geographies and markets that increase the reach of our research.

**c.4 Plans for research impact:** Comprehensive Impact Roadmap plans will be developed around the Unit's research impact 'diamonds'. These plans will develop measurable objectives with clear milestones and deliverables. The plans will be appropriately resourced and subject to regular review and evaluation. Principal investigators will be supported by new impact support teams exploiting the Unit's early successes with recently appointed public engagement staff and through redeployment of research administrators trained to support research impact management.

**c.5 Methods to articulate, evidence and benchmark research impact:** The Unit will also use the University's expertise in marketing and communications and commercial outreach to further develop events, branding, and multi-media relations. The Unit will continue to develop effective qualitative and quantitative toolkits to capture the impacts in terms of reach and significance.

#### **d. Relationship to case studies**

Case studies in *pelvic organ prolapse*, *HIV testing*, and *healthcare associated infection* demonstrate the Unit's approach to improving health and wellbeing through impact on policy and practice. The *healthcare associated infections* case study provides a strong example of the Unit's dedication to interdisciplinary research that spans laboratory-based basic science, through clinical application and translation to effective policy that leads to change in health. In this case high-quality, laboratory based research led to new discoveries of mechanisms for healthcare infection transmission. These findings were quickly translated to new health policies and changes implemented in practice that has contributed to improved hospital-based infection control and prevention. This model has significantly influenced the Unit's research strategy, led directly to new investment within this programme through strategic appointments with Health Protection Scotland (Hutchison, Goldberg), and identified an 'impact diamond' going forward.

Similarly, the *HIV testing* case study exemplifies how hard-to-reach communities can be accessed by dedicated teams of researchers in the field to make new discoveries of health risk behaviours; how those behaviours can be modified through the development and testing of new practices to bring about improvements in public health; as well as increased public awareness of health risks, and beneficial changes in public behaviour. In the *pelvic organ prolapse* case study, the Unit shows how definitive clinical trials, supported by funding from major UK bodies, has led to improved outcomes for newly developed and successfully tested pelvic prolapse interventions, and how the published studies have led to changes in policy and practice with global reach.

The *Biopta* case study demonstrates success with commercialisation impact within the biotechnology and pharmaceutical sector. It serves as a successful future template for the Unit's biomedical scientists who aim to extend commercialisation activities, particularly within a wider applied health strategy to translate fundamental discoveries to effective treatments for chronic disease. Closer to the Unit's end-users, clinicians and SME companies in the medical devices sector, the *orthotic 3D printing* case study demonstrates how large-scale, international and interdisciplinary research can change global awareness in the SME sector in technology development and new treatment developments to change attitudes and beliefs. It illustrates the Unit's targeted use of media and events as effective tools to deliver research impact.