

<p>Institution: University of Surrey</p> <p>Unit of Assessment: UOA 3 Allied Health Professions, Dentistry, Nursing and Pharmacy</p> <p>a. Context</p> <p>The University of Surrey has traditionally positioned itself as an applied centre of excellence, with impact at the very heart of the institutional mission and embedded within the University Charter. Achieving impact from research is part of the culture in Health and Medical Sciences; staff have an established and extensive track record in conducting research that is impact driven and engaging with beneficiaries.</p> <p>Our main users include:</p> <p>Pharmaceutical, healthcare and food industries, within the UK and internationally. These include major pharmaceutical companies (e.g. GSK, AstraZeneca, Lilly), small pharma (e.g. Oncolytics), healthcare (e.g. NHS, Unilever) and food (e.g. Nestle, Danone) sectors.</p> <p>Central government organisations, including the Food Standards Agency and the Department of Health. Specifically, impact is delivered through engagement with the Committee on Toxicity in Food, the Environment and Consumer Products Committee and the Special Advisory Committee on Nutrition (SACN). Health impact is also delivered through the Commission on Human Medicines, the MHRA, NICE, the emergency cardiac board and the National Cancer Survivorship Initiative. In addition, our work impacts on the Department for Environment, Food and Rural Affairs through the Avian Expert Group Committee and Poultry Diseases Group.</p> <p>Third sector national organisations/charities, including involvement in the Meningitis UK's Scientific and Medical Advisory Panel, BHF Health Professions Advisory Group, World Sleep Federation, European Biological Rhythms Society, European Society of Cardiology, European Academy of Cancer Sciences, World Oncology Forum, and the WHO working group on the Pathogenesis of Buruli Ulcer.</p> <p>Impact typically manifests as improved clinical outcomes, patient well-being and enhancing the awareness of health risks and benefits in many instances delivering changes to policy.</p> <p>b. Approach to impact</p> <p>The user-relevant research outputs and activities of the Unit are diverse and innovative. This variety reflects the Unit's broader commitment to engage with a wide non-academic audience. The core areas of activity are:</p> <p>Partnership building between academic and non-academic users. This can be seen in projects working with both industrial and healthcare sectors. For example, the development of long-term partnerships between the Unit and industrial partners such as Pfizer and Phillips has grown from small-scale projects to larger interactions, resulting in the development and exploitation of novel technologies. This has been facilitated at an individual academic level through our longstanding relationships with industry, built around our professional training ethos. At the institutional level a formal Industrial Advisory Group was established in 2007, and comprises senior leaders in business and health providers. This group both advises on, and acts as a conduit for, partnership opportunities.</p> <p>Networks. Staff develop relationships with non-academic users through a number of different routes including network meetings arranged by the University with the South East Economic Development Agency, the European Enterprise Network, KTP and other Department for Innovation Universities and Skills programmes, showcase events and industrial collaborations. Our lead role in the recently formed Kent, Surrey and Sussex Academic Health Sciences Network is an important part of our on-going strategy, positioning us to be able to interact with the relevant world-leading groups required to meet the multidisciplinary challenges within the healthcare arena both in</p>

the present and the future.

Public Engagement/Outreach. Faculty staff participate in a wide range of media-friendly outreach activities, ensuring our research is disseminated to the widest possible audience, as well as engaging with the general population. Such interactions often require close working with the University's communication team, ensuring that our world-leading science reaches the intended stakeholders. The Unit has a strong relationship with the University's Media and Publicity Office and staff have had extensive contact with media environments. In addition to University-funded public engagement programmes, we are keen to embrace alternate approaches to support our impact development. An example of the successful use of externally generated support for our impact programme is the MILES initiative; an EPSRC-funded scheme to support the development of collaborative projects between the mathematical-, social- and bio-sciences. This scheme (2010-2013) supported over 50 projects, with examples including the development of the community microbes project and public debate on the role of Occam's razor in Systems Biology. As part of the MILES programme, staff also participated in 'stakeholder days', designed to ensure that research projects were developed in a manner most likely to result in significant impact.

University Support

The Unit is supported in its approach to impact by the University's Research and Enterprise Support (RES) team. As well as providing KTP expertise and support for consultancy, RES provides project management for the key partnerships and requisite commercial, legal and IP expertise to help support the creation of impact. This institutional resource aids the interaction between academic staff members and commercial partners, as well as flagging and tracking potential IP exploitation opportunities. In addition to University-level support through RES, staff involved in health-related research are supported by the Research Design Service South East. This service is one of only 10 Centres funded by the National Institute for Health Research in the UK, with staff members holding permanent University of Surrey positions. The service provides a wealth of research support for the generation of successful research with demonstrable impact in the healthcare arena, such as research for patient benefit funding.

c. Strategy and plans

The University has conducted a review of the impact activity since 2008 and is moving towards a more formalised structure and support around impact. The successes in the REF period have informed the Unit's strategy for achieving impact beyond 2014. The review has also highlighted activities that could be better exploited, and in some cases work has already begun on these. The key elements include plans to:

- Update annual staff appraisals to recognise and reward achievements in impact, and recognise excellent impact at University level through annual awards.
- Increase exposure and dissemination of impact activity in the University through the appointment of an 'Impact Champion' in each Faculty who will report to the Faculty Research Committee.
- Expand Faculty-level 'awaydays' to discuss impact-related research matters. During the assessment period specific sessions have already been used to develop a coherent impact strategy driven by Faculty staff.
- Expand our annual Faculty Festival of Research, which is a celebration of our research activities, to present impact case studies to stakeholders who attend this event.
- Strengthen our alumni programme to ensure that our graduates remain advocates for the Unit's research and technical capabilities throughout their careers.
- Maintain and build on long-standing relationships through periodic updates, aiming to

Impact template (REF3a)

understand business needs and outlining our research plans to end-users at an early stage.

- Continue to expand work with pharmaceutical companies, through targeted networking events to showcase specific technologies, as well as more generic marketing and alumni engagement.
- Develop Collaboration Surrey, a University funded venture which plans Collaboration Café events, themed networking events, industry and stakeholder days, behind the scenes tours, and meet the expert events, as well as supporting a small grants scheme.
- Grow outreach activities, with a designated Faculty Marketing Officer, research blog, as well as an independent public engagement pathway through the Collaboration Surrey, FameLab and Bright Club initiatives.

d. Relationship to case studies

The seven case studies reflect the breadth of research in the Faculty with work ranging from disease diagnosis through to nutritional advice. The selected impact case studies have led to significant benefit to stakeholders, with impact evidence that either enhances healthcare, or has had a positive impact through policy and services. The underpinning research ethos of the Faculty encourages the type of activity detailed in these case studies through targeted support. During the assessment period, the implementation of additional support activities has further facilitated the development of impact, and led to a reduced lead-time to impact.

Case Study 1: A rapid blood-based diagnostic test for meningococcal disease adopted worldwide

Case study 1 describes how staff achieved **impact on health and wellbeing** through our interaction with the relevant health organisations (e.g. Public Health England, UK, and the World Health Organisation) which led to validation and implementation of this test on a global scale. The translation of the initial research discovery, through small-scale trials to global acceptance was only possible through the interaction of the lead researchers with relevant commercial and governmental bodies, which was supported through the University RES team.

Case Study 2: Saving lives through the altered use of routine oxygen therapy in acute myocardial infarction

Health and wellbeing impacts can also be seen through the alteration of both national and international policies as a direct result of research undertaken by staff in our Nursing and Healthcare research group in Case Study 2. The case demonstrates how researchers from Surrey were instrumental in eliminating the use of oxygen as a first line treatment for myocardial infarction. This impact was brought about through representation on national (e.g. NICE) and international (e.g. European Society of Cardiology) bodies, enabling researchers from Surrey to drive the implementation of this important health practice change worldwide, potentially saving many thousands of lives every year.

Case Study 3: Improved work productivity and enhanced health and wellbeing through novel lighting systems

The world-leading research encompassed within our Sleep, Chronobiology and Addiction Group has delivered major **health and wellbeing, policy and commercial impacts**, as evidenced through Case Study 3. Through the industrial networking opportunities facilitated by our University Impact Strategy, a long-term partnership between the University and Phillips Lighting has facilitated the translation of this academic research into a major non-academic impact. In addition, the participation of Surrey researchers on major national and international working groups on light (e.g. International Committee on Illumination) has helped drive policy in workplace lighting, allowing the realisation of this impact as quickly as possible.

Case Study 4: Improving population health and wellbeing through changing public perception of the link between dietary cholesterol and cardiovascular disease risk

Our work on the link between dietary and plasma cholesterol described in Case Study 4, demonstrates both **health and wellbeing, and public perception impacts**. Close coordination between the academic researchers and the communications team of the University led to a number of public engagement opportunities, through national newspapers, radio and TV, and resulted in a significant alteration in the public perception of the health benefits of eating cholesterol-rich food such as eggs.

Case Study 5: Reducing reoffending rates in young offenders through speech and language therapy

Through representation on government committees, and lobbying of members of parliament, we have influenced Governmental policy, **leading to societal and policy impacts** as evidenced by Case Study 5. In this case study, inclusion of members of the Surrey research team on HM Inspectorate of Prisons inspections of young offender's institutions, coupled with lobbying of members of parliament through representation to the Justice Select Committee and Bercow Reviews was key to delivering timely impact. Importantly, this lobbying was central to the introduction of the policy impact, with only five years between the initial underpinning research (2004) and its first inclusion in training policy (2009).

Case Study 6: Nutritional interventions for improving the health and performance of the UK military forces

University-level support activities for discussions between academic researchers and potential stakeholders were a key driver in the development of Case Study 6, where nutritional science research on bone health within the Faculty was applied to the training of UK armed forces personnel through the MoD. Through representation on the SACN, and advice to government via the FSA, DoH, and MoD, researchers at Surrey were able to emphasise the importance of correct nutritional balance for optimal performance of the armed forces both in training and during active deployment. Once again, the impact strategy of the University aided both initial discussions and the rapid development of the resulting impact, delivering a **policy impact** within only four years following the initial research, as well as subsequent **health and wellbeing, and economic impacts**.

Case Study 7: Improving the health and wellbeing of cancer survivors

Due to the improved treatment of chronic diseases such as cancer, we are now faced with the challenge of managing cancer survivorship. In Case Study 7 an active engagement with policy makers, care providers and the general public was central to the timely development and dissemination of information for cancer survivors. Such complex interactions between multiple partners was facilitated through the University impact strategy, resulting in policy development within only two years, and translation of this policy into public engagement within three years. As such we were able to deliver **policy, societal, and health and wellbeing impacts** within a remarkably short period of time.