

<b>Institution: Kingston University</b>
<b>Unit of Assessment: 3, Allied Health Professions, Dentistry, Nursing and Pharmacy</b>
<p><b>a. Context</b></p> <p>The research conducted in this Unit has had impact on public policy, health and professional services and social enterprise domains. This impact is generated through developing applied and analytical science with and for industrial and governmental stakeholders as well as nursing and therapy professional services. There is cohesion and continuity between basic and applied research and non-academic stakeholders. The beneficiaries of the research include health service and industrial stakeholders, regulatory bodies, national patient organisations, national health professional training regulatory bodies and national nursing and therapy professional bodies.</p>
<p><b>b. Approach to impact</b></p> <p>The approach to impact is to inform public knowledge and policy, nursing and therapy professional practice and public services. The research of the Unit is diverse in approach, multidisciplinary in skill base and involves members of the public as well as those from scientific, service and commercial communities. This approach to collaboration and involvement with external stakeholders and agencies enables the Unit to develop impact through needs-based research.</p> <p><b><i>Development of Policy and guidance</i></b></p> <p>Engagement with the European Food Safety Authority (EFSA), through chairmanship of a key working group, has led to a reduction of around 75% in the number of erroneous outputs generated by EFSA, enabled by the Unit's research outputs.</p> <p>Research at KU involving investigations into doping in sport has resulted in interest from World Anti-Doping Agency (WADA) in new research methods that could effectively combat doping, given that previously used methods (testing and direct questioning) were incapable of providing reliable data needed for operative policies and their evidence-based evaluation. The research led to significant impact on the anti-doping efforts through work in the Doping Prevalence Working Group, which conducted an epidemiological investigation into the prevalence of doping in sports and the development of the new Athlete Anti-Doping Modules reaching well over 200,000 athletes globally.</p> <p>Other agency collaborations include the Animal Health and Veterinary Laboratories Agency (AHVLA), the Food Standards Agency, UK Sport, the Food and Environment Research Agency (FERA), Defence Science and Technology Laboratory (DSTL), the British Poultry Council and five NHS Trusts.</p> <p>The Unit seeks to achieve impact on healthcare policy and guidance as a result of engagement with public bodies. Outcomes from studies into long term conditions have been used in:</p> <ul style="list-style-type: none"> <li>• National Institute of Clinical Excellence (NICE) Guidelines on the Care and Management of Osteo-arthritis (also published by NICE as a Quality Innovation, Productivity and Prevention case study)</li> <li>• Department of Health End of Life Policy for people with learning disabilities</li> <li>• Health Professions Council standard on patient involvement for professional training</li> <li>• Department of Health policy for carers.</li> </ul> <p>Research in the nursing workforce has been used by and cited in</p> <ul style="list-style-type: none"> <li>• the 2010 Prime Minister's Review of Nursing (reaching 400,000 NHS nurses)</li> <li>• guidance on selection and recruitment of mental health nurses in the London region of the NHS (population 8 million, 11 Mental Health Trusts)</li> <li>• community nursing workforce research in the London regional NHS workforce plans</li> <li>• the submission by the Queen's Nursing Institute to the House of Commons Health Select Committee, whose report noted that the NHS spends approximately £4.6 billion annually in</li> </ul>

**Impact template (REF3a)**

education and training.

***Advances in Healthcare Practice***

The Bridges stroke self-management programme, developed within the Unit, has been implemented across the NHS in the UK and in New Zealand. These impacts were supported by a) Kingston University and St George's, University of London seed funding, b) Enterprise Units that facilitated the exploitation of the outputs, c) business mentoring from social enterprise support provider UnLtd UK, d) external investment of £50,000.

A TSB-funded consortium with TwistDX and AHVLA led to the development of a novel molecular diagnostic tool based upon molecular detection of a bacterial respiratory pathogen that has implications for patient-side detection.

The Unit has undertaken research in the development of a prediction engine for improved HIV combination therapy (EU FP-6 funded). In the HIV project, the Unit has collaborated in pan European consortia comprising academic institutes, hospitals and multinational companies (IBM) to enable the development of a prediction engine for improved HIV combination therapy across Europe (<http://www.euresist.org>). The work described here involved improving disease diagnosis/detection and treatment in conjunction with academic and non-academic stakeholders.

***Analytical research***

The Unit has undertaken collaborative research with organisations such as Moy Park Ltd and Bernard Matthews Ltd, Summit Plc, Eli Lilly, Vantix Ltd, TwistDX Ltd, the Institute of Cancer Research, LGC, GSK, Sunnyslab, the Royal Marsden and Guys and St Thomas' hospitals, covering the research areas of rapid detection of pathogens/disease markers in cancer, adapting emerging molecular technologies for point of care detection, infection control, food safety, dental health and dentifrice development, biomarker analyses, High Resolution NMR techniques, genome sequencing, drug development and application of new treatments/therapy adherence. The impacts from these collaborations include policy and product development. These collaborations have arisen and expanded as a result of personal connections, through networking events and through the wider activity of the University's Enterprise Support Department. In addition, two projects have been funded by the Technology Strategy Board.

***Public engagement***

Public engagement in basic science, and in nursing, therapy and service research, is a cross-cutting theme in the Unit. A programme of Patient and Public Involvement (PPI) in health and social care research, (recently cemented with the launch of a Centre of Public Engagement), has transformed methodological approaches to involve patients as active partners, contributing both evidence and theoretical insights. The Handbook of Service User Involvement in nursing and healthcare research (Morrow, Boaz, Brearley, Ross et al 2012) has been adopted by the Royal College of Nursing as its evidence-based good practice guidelines on service user involvement for research, and is available free to its membership (400,000).

Research involving patient participation in mental health care has delivered radical change in the physical environment and nursing care for detained patients in Finland. Since the research was completed, the change in practice and the ethos of patient involvement has been sustained.

The Unit also runs other public engagement activities including Café Scientifique events, participation in public debates at the British Science Festival, appearances in visual, print and radio broadcasts and input into information portals such as the EuResist Network and the "Breaking Bad News" website <http://www.breakingbadnews.org> that provides carers with guidance on supporting people with intellectual disabilities at the end of life.

***Support structures***

Engagement with industrial stakeholders has been enhanced by enterprise networks such as Westfocus Entrepreneurship Centre, a collaborative networking venture between seven Universities in south and west London and the Thames valley which brings together academics, entrepreneurs, local business and community groups; the Enterprise Europe Network (EEN) which is funded by the EU and enables Kingston University to provide services and networking to SMEs

and other European partners; KTPs and other Department of Business, Innovation and Skills (BIS) programmes. These partnerships are supported by the Enterprise Support department of Kingston University and facilitated by a local Business Development Manager (BDM).

**c. Strategy and plans**

The Unit's strategy is to build and expand sustainable research that is applied and analytical, and that has a direct impact on industrial, governmental and nursing and therapy stakeholders through generation of new treatments, innovation in health improvement, nursing and therapy professional practice and policy development.

Research will be driven forward by encouraging responses to sector requirements both in terms of basic science and healthcare. This will include commercialisation and licensing of IP, with the pursuit of KTP projects, and grants to facilitate the translation of research to the commercial sector. For example, current work within the Unit was incorporated into a grant submission to the MRC Biomedical Catalyst DFPS call (2<sup>nd</sup> round: submission late 2013). The Unit's involvement with the EEN network has facilitated opportunities to develop and translate research activities into commercial settings that are likely to yield future impact and so increase access to equipment and facilities for researchers and future partners. These activities will be supported by the Research and Enterprise teams (4 FTE, including the BDM).

Impact strategies are built into all new grant applications. As well as enabling the capture of impact through the identification and tracking of potential IP exploitation opportunities, sustained contact with key stakeholders will be achieved by on-going contact between academic researchers and partners, augmented by BDMs acting as conduits following meetings and networking events. The university will provide seed funding that Unit members and research partners can use to test and develop products and services emerging from the research.

Public engagement, as well as close collaboration with health care provider innovation and implementation networks such as the South London Academic Health Sciences Network (AHSN) and the Collaborative Leadership in Applied Health Research Care (CLAHRC), are key strands in the impact strategies. An example of this is the Bridges stroke self-management programme (Bridges Ltd) which has a growth plan with investors to create a scalable business that provides a social and economic return. This includes knowledge transfer activities with the AHSN.

The Unit is contributing to a project by the European Association for Palliative Care, which will produce European guidelines for palliative care for people with intellectual disabilities in 2014.

**d. Relationship to case studies**

**Bridges:** Bridges Ltd is a social enterprise spin out company that provides innovative and evidence-based self-management of stroke. Stroke survivors are involved in governance, service delivery and dissemination throughout its work. The programme has been delivered to healthcare specialists in the UK and New Zealand. This has resulted in changes in practice towards self-management approaches in stroke care, exemplifying engagement with service users, practitioners and stakeholders.

**EFSA:** The work has contributed to improvements in practices and procedures of EFSA. This led to a *circa* 75% reduction in the number of erroneous outputs generated by EFSA, with consequent benefits to food safety across the EU. This work shows policy impact by improving the quality of the scientific advice provided by EFSA to EU stakeholders, with consequent reductions in food risk for EU citizens and relates directly to the Unit strategy of engaging with commercial and governmental stakeholders to influence policy.

**Changing policy and practice in psychiatric hospitals in Finland:** An evidence based educational intervention has led to reform of psychiatric nursing practice in Finland. With service user involvement throughout, mental health nurses have been trained to deliver effective, ethically appropriate therapeutic interventions for highly distressed and disturbed patients. Outcomes include therapeutic benefits, which have led to change in policy and practice with dissemination to other psychiatric hospitals in Finland. This work is an example of achieving improvements in healthcare through the promotion of training of professionals and patient involvement.