

Institution: City University London
Unit of Assessment: 3 Allied Health Professions, Dentistry, Nursing and Pharmacy
<p>a. Context</p> <p>The research strategy of the School of Health Sciences is to produce world-leading applied healthcare research that impacts policy, service delivery and practice. The School conducts and disseminates high quality applied clinical and health services research which impacts on health outcomes, improves the quality of life of patients and reduces costs in the National Health Service and private sector. The primary non-academic user groups and beneficiaries of the School's research are patients, users, health care professionals, informal carers, policy-makers and commissioners of health services and industry. The School has created strong partnerships with service providers, which enable clinical research to be conducted in healthcare settings. Enterprise initiatives benefit commercial companies such as Baxter Healthcare, Philips Healthcare and Bosch Healthcare (Professor S. Newman <i>et al.</i>) and Max-Planck (Professor M. Morgan, FRS). In addition to those presented in the submitted impact case studies, examples of impact on practitioners, services and service users include:</p> <ol style="list-style-type: none"> 1. The first standardised clinical assessment of language impairment in British Sign Language (BSL), arising from research led by Professor G. Morgan in the Gesture, Deafness & Sign Research Group. The group has examined the impact of acquired language and cognitive impairments on sign language and published the first investigations of aphasia in users of British Sign Language. Their work has benefited the psychosocial quality of life of deaf children with dyslexia by improving their spoken and sign language skills and has led to changes to national and international pedagogical practices and methods. 2. Improvements to screening for glaucoma both nationally and internationally, through the development of monitoring processes to detect deterioration of vision, arising from research led by Professors D. Crabb and J. Barbur in the Measurement Techniques in Vision Group. Beneficiaries include people at risk of visual impairment, healthcare organisations and policy-makers. 3. The development of pharmaceuticals to combat night blindness and therapeutic tools for treating retinal neurodegenerative disease through practical application of research led by Professor Morgan, FRS working with Max-Planck; Professor C. Tyler working with the Smith-Kettlewell Brain Imaging Centre; and Professor Crabb working with Allergan Incorporated in the Visual Neuroscience and Psychophysics and Neurobiology Research Group . 4. The development and evaluation of self-management interventions through grant-funded research in heart failure, diabetes, renal dialysis, benign prostatic hyperplasia and rheumatoid arthritis among other conditions led by Professor Newman in the Self-Management of Long Term Conditions Group. Through this work, health care professionals have been trained to facilitate behaviour change in patients and the effectiveness of these interventions has been evaluated in randomised controlled trials. An example of impact includes behaviour change in patients with Type 2 diabetes, fewer symptom reports and reduced intervention in cases of benign prostatic hyperplasia (BPH), reduced mortality and morbidity in newly diagnosed heart failure patients and improved clinical outcomes in renal dialysis (Best abstract, European Renal Association meeting for clinicians and scientists, 2013). This work and the publications it has generated have led to the incorporation of self-management in the guideline of a number of chronic conditions including diabetes and heart failure. 5. Improvements to the screening and treatment of mental health problems during pregnancy, after birth and in pre-adolescent children. This arises from research led by Professor S. Ayers in the Maternal and Child Health Education and Community Health Group, which focuses on the mental health and psychological wellbeing of mothers, their partners and children and identifies mental health needs and the impact of mental health difficulties on families and parenting.
<p>b. Approach to impact</p> <p>A high proportion of research conducted by the School of Health Sciences is translational in nature and undertaken in partnership with clinicians and practitioners as key users, enabling more direct and immediate impact on practice and policy. Staff are encouraged to follow up opportunities to engage in the implementation of research outcomes in partnership with key users, for example, through acting in an advisory role in the development of policy and guidelines. Research which can lead to impact on policy forms a core strand of our activity and is fully supported by the School. The work of the Health Services Research Centre on telehealth and</p>

telecare led by Professor Newman provides a particularly significant example. This was funded through the Policy Research Programme and specifically designed to inform policy for the Department of Health. Numerous meetings were held with Department of Health officials including the Head of Long Term Conditions, the Minister for Social Care and the incoming Secretary of State for Health as well as the All-Party Telehealth Group. Round table discussions with industry also took place (e.g., with Philips and Bosch Healthcare). The team has also provided advice to health services and industry in the UK including the Telecare Services Association and in other countries including Australia, New Zealand, Denmark, Holland, Singapore and the European Commission. In the UK, the research led to a specific Department of Health initiative, launched in 2012, for telehealth and telecare electronic equipment, sensors and aids used in a person's home to be distributed to three million people with long term conditions and/or social care needs (www.3millionlives.co.uk).

The School also promotes contact with policy-makers through its events such as the Dean's Lecture Series. Examples include: a lecture on the organisation of the Health Service delivered by Professor C. Ham, Chief Executive of the King's Fund, in October 2012 following the introduction of the Health and Social Care Bill; an event focused on the future of healthcare held in September 2013 to launch our new suite of Masters programmes with speakers including the Chair of the Health and Care Professions Council, the Managing Director of UCL Partners, the Managing Director of Health Education North East and Central London and the Director of Nursing for Health Education England and the Chief Nurse of Health Education England; and the inaugural lecture series for our new professors. The Speaker of the House of Commons, the Rt. Hon. John Bercow MP, opened our conference 'Lost for Words, Lost for Life' in June 2011, which focused on children with speech, language and communication needs. The Speaker has also facilitated contacts with Parliamentarians with an interest in this field.

A model in the School for the involvement of users in research has been developed by the Mental Health Nursing Group (led by Professor A. Simpson) which has established an international reputation in this form of collaboration. The Service User and Carer Group Advising on Research (SUGAR), which meets monthly to discuss the research findings of the academic staff in the group, was commissioned by the NIHR Mental Health Research network to write the *Good Practice Guidelines for Involving Carers, Family Members and Close Friends of Services Users in Research*.

The Long Term Mental Health Conditions Group has worked with Clinical Academic Units in NHS Trusts on research into the self-management of long-term physical conditions, interventions and the development of physical and psychosocial support mechanisms that impact upon the management of chronic conditions. Research has involved collaboration with health and care service providers including the East London NHS Foundation Trust, University College London Hospitals, the Whittington NHS Trust, King's College Hospital NHS Foundation Trust, Moorfields Eye Hospital NHS Foundation Trust, Stoke Mandeville Hospital, the Royal National Throat, Nose and Ear Hospital, Bupa and the East and North Hertfordshire Clinical Commissioning Group. To increase the impact of our self-management programmes we have developed a training programme for health care professionals that has been widely used, including in Singapore where we have demonstrated improved clinical outcomes and adherence in end stage renal disease.

A further example is the work on Patient Safety in the Health Services Research Centre, which focuses on two specific patient safety areas: infection prevention and control and mental health: resuscitation, medication safety and patient safety policy. Through their publications and networking with MPs and MEPs, their research has informed professional guidance including the 2009 *World Health Organisation Guidelines on Hand Hygiene in Health Care and Their Consensus Recommendations*. A publication by Professor D. Gould, Dr N. Drey and S. Creedon on hand hygiene was selected as the best review in 2011 in the *Journal of Hospital Infection*, the leading journal associated with infection control. The group's patient safety-focused *The Never Events* policy framework is being deployed nationally to inform healthcare practitioners' practice.

Public clinics operated under academic staff supervision provide another vehicle for generating impact from research. The Fight for Sight Eye Clinic offers a wide range of eye care services to the public and local businesses and supports research undertaken by Professor Barbur, working with ophthalmologists, on early detection of Age Related Macular Degeneration and Professor J. Lawrenson's work on the use of technology in screening for glaucoma. The Aphasia Clinic examines ways of improving communication in disabilities that impair speaking, understanding,

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reading, or writing.

With a group of international partners, we have played a key role in the development of a tool to assess recovery from surgery and anaesthesia, the Post-operative Quality Recovery Scale (PQRS). To ensure that this research achieved maximum impact, we published our findings in key publications, presented the research at conferences attended by key opinion leaders (e.g., World Congress of Anaesthesia, American Anaesthetic Association Meeting, European Society of Anaesthesia, a meeting of the Royal College of Anaesthesia) and used the University's digital resources and expertise in the building of a website (<http://www.pqrsonline.org>) to encourage wider dissemination among the general public. This engagement strategy led to the adoption of the PQRS by the European Society of Anaesthesia as the tool to assess quality of recovery from surgery and anaesthesia.

The widespread reach and impact of our research activities is supported by the University's Press Office, which promotes our research and thought leadership in the media, through social media networks and by the co-ordination of meetings with key opinion leaders through our events programme. Examples of recent media coverage include a March 2013 BBC news item on the benefits of telehealth arising from the Whole System Demonstrator project led by Professor Newman and an opinion piece by Professor Simpson in the *Nursing Times* in July 2013 advocating the use of peer support in mental health care. Research by Professor A. Burls on the use of oxygen therapy for heart attack sufferers has been published as a Cochrane Review. Our public dissemination of research also benefits from the University hosting The Conversation UK (<http://theconversation.com/uk>) where UK academics write about their research for a lay audience.

Mechanisms in place within the School to support and enable staff to achieve impact from their research include:

- An emphasis on translational research that lends itself to impact on practice and policy in the recruitment of academic staff
- A focus on opportunities for and achievement of impact from research in staff appraisal and requirements for promotion
- The provision of financial support for presentations at practitioner-focused events as well as policy conferences
- Financial incentives for staff to develop research with impact, through the consultancy policy which allows income to be transferred to support further research activity
- Support for staff to engage with policy development through membership of government and other advisory bodies including time required to attend meetings reflected in our workload management model.

All academic staff are expected to pursue impact for their research through dissemination and influence via conference attendance. Generous grants are available for this purpose through the School's Research Sustainability Fund and all requests for conference travel have been supported through the School's Travel Grant Fund. The School has recently funded the My Home Life work of Professor J. Meyer in which, as part of a sub-project focusing on Dignity, Professor Meyer has delivered a series of seminar presentations in Porto, Portugal to clinicians involved in caring for older people in care homes.

The School also hosts conferences to attract practitioners. Professor V. Joffe's 'Lost for Words, Lost for Life' conference in 2011 is an excellent example of this approach to impact. Held at City in collaboration with I CAN and Afasic, the two main charities which support children and young people with speech, language and communication needs, the conference was attended by several hundred therapists. The School's 2012 Symposium on Aphasia Therapies, chaired by Professor J. Marshall, attracted more than 200 researchers and practitioners from across the UK and Europe. With funding from the Research Councils UK Digital Economy Programme, this project has developed an affordable, computer-based therapy tool that can be used at home to help people with severe aphasia to communicate through gestures.

Higher Education Innovation Funds (HEIF) are available for staff to use in the development, marketing and commercialisation of new products. The University's Enterprise Office supports this activity, providing particular expertise in the fields of patenting and spin-out opportunities. One example of use of these funds is the patent protection of the *Eyevisor* led by Professor Crabb. This is a portable PC-driven optical instrument that will perform many of the eye tests currently

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undertaken in an optician's office using separate instruments. This project has run for three years and received a grant from the competitive "Emerald Fund" and additional funding from School and Enterprise Office budgets to pay for product and business plan development, market surveys and commercialisation. The Enterprise Office also supported Professor Barbur in the development of a spin-out company, City Occupational Ltd. With the provision of state-of-the-art facilities, this company is having a substantial impact on the aviation industry and other UK government projects (further details are included in one of the submitted case studies).

c. Strategy and plans

The School's strategy and plans are based on the University Framework for Impact which specifies that the University is committed to supporting its staff in the achievement of impact by taking it into consideration in recruitment, appraisal and promotion. Staff support for impact from research is facilitated through workload management which recognises and provides time for such activity. Encouraging and enabling research activities to facilitate the co-production and application of knowledge beyond the University and thereby generate impact is a high priority. The School strategy regarding impact has been further refined through the School's Research Committee and Research Sustainability Fund (RSF) Committee, with input from the Research Centres to ensure that we keep the processes to achieve impact under review. We provide comprehensive support to staff in order to undertake and extend research with dissemination strategies to ensure impact. Marketing and funding strategies alert the public and private sector to new innovations being developed in the School. Specific initiatives to achieve impact in current and future research include: training for staff and PhD students on public engagement, engagement evaluation and writing for impact; identifying strategies for integrating considerations of impact and engagement into the research process; formulating a more structured approach to contributing or responding to consultation exercises; and further developing and refining the criteria for recognising contributions to impact in decisions on promotion. The School will continue to support the Fight for Sight Eye Clinic and the Speech and Language Therapy Aphasia Clinic as mechanisms for delivering impact from research. In addition we will refine our enterprise activity through high quality consultancy and the commercialisation of our intellectual property. We will develop and expand our existing successes in working with the professions in healthcare and commercial companies to realise the commercialisation of our intellectual property and by continuing to bid for research funding which promotes impact, in particular through follow-on initiatives.

d. Relationship to case studies

The selected case studies exemplify the School's support and the mechanisms that it has put in place to achieve impact that influences policy and practice. One example that demonstrates our approach is the case study *Advanced Colour Vision Test for Healthcare and Occupational Environments*. This work was supported and enabled through provision of tuition fee waivers for doctoral students, bridging funds, two full-time technicians and the purchase of state-of-the-art laboratory equipment (>£600,000). This led to the School supporting the establishment of a spin-out company which enabled the new colour vision assessment techniques to be developed and disseminated globally.

Another example of the School's approach to impact from research is the support through workload allocation to two members of staff and the allocation of a full time post-doctoral research fellowship for three years provided through the School's Research Sustainability Fund for the Development Assessment & Intervention Research Group associated with *Supporting children and young people with language and communication needs*.

Finally our commitment to encourage and enable research activities which facilitate the co-production and application of knowledge beyond the University and thereby generate impact has been demonstrated through the provision of two full-time doctoral studentship posts and a senior lecturer post as part of our recruitment exercise in the Maternal and Child Health Research Centre. This was to facilitate the impact of the *Women's Choice About Place of Birth* research. This has achieved a significant impact on national and international guidelines for commissioning and on reconfiguration of services to include Midwife Units, to tackle the rising rates of intervention in childbirth and to underpin informed choice for patients. This research is being used by policy-makers, commissioners and managers to plan future services and by midwives to support informed choice discussions.