Environment template (REF5)

Institution: Bangor University

Unit of assessment: Panel A, UoA03 Allied Health Professionals, Dentistry, Nursing and Pharmacology

a. Overview

Health is one of three strategic research priorities for Bangor University. The present return highlights our developing research strengths in two areas: (i) applied health care research from the Schools of Health and Medical Sciences (Burton, Hughes, Neal, Noyes, Rycroft-Malone, Tudor-Edwards, Wilkinson, Woods) and (ii) biomedical laboratory research from the School of Biological Sciences (Cha, Fleck, Hartsuiker, Shepherd). Within these areas our research is focused and integrated through the methodological approaches of implementation research, knowledge synthesis, health economics and molecular laboratory studies, with key clinical foci on rehabilitation, dementia and cancer.

In RAE 2008, we returned health-related researchers to UoAs 7 (Health Services Research) and 14 (Biological Sciences). Since then, strategic and administrative realignments have led us to submit a single unified submission reflecting our increasing integration of clinical, laboratory and social sciences expertise to address health-related issues. Key developments include: the expansion of our research partnership with the Betsi Cadwaladr University Health Board; the transfer of a primary care research group from Cardiff University to Bangor; the increasing collaborations between clinical and laboratory researchers via the North West Cancer Research Institute; and the integration of medical and health research within the Schools of Health and Medical Sciences. These Schools are part of the College of Health and Behavioural Sciences, which also includes two long-established centres of research excellence, the Schools of Psychology and of Sports, Health and Exercise Science. At the same time, Biological research has been integrated into the College of Natural Sciences. Links between laboratory scientists working on health-related questions and clinical researchers have been expanding; their research has become increasingly integrated into the strategy of the Schools of Health and Medical Sciences.

This interdisciplinary approach has greatly enhanced our ability to attract research funding, yielding more than £20M in health-related research capture across the units during the census period. This has been possible because of an increasing focus on health related research as a University priority, the establishment of mechanisms for integration and collaboration across researchers and groups, and, meaningful engagement with stakeholders including service users, charities, and third sector organisations.

b. Research Strategy

Our consistent objective has been to enhance health related research within strategically targeted areas to impact on the health and well-being of Wales, the wider community, and beyond. We are addressing research problems that are priorities of the Department of Health/National Institute of Health Research/National Institute of Social Care and Health Research, Economic & Social Research Council, and Medical Research Council, including improving the outcomes of people with cancer, dementia, and stroke, whilst taking a lead on methodological innovation in evaluation approaches and evidence syntheses.

Major developments in the REF period

To integrate our strengths in health-related research, the College of Health and Behavioural Sciences brings together several Schools, with complementary strengths and substantial opportunity for collaborative interdisciplinary research. Most central for this return are the newly reformed **Schools of Health & Medical Sciences**, which provide a unified research and educational environment incorporating staff from the former School of Health Care Sciences, School of Medical Sciences, the Institute for Medical and Social Care Research, and the North Wales Centre for Primary Care Research.

The new schools have a single administrative structure and a unified research strategy; the research committee is chaired by the Deputy Head of School (Research) and includes researchers from both laboratory and applied health care sciences. Two other Schools in the College add substantially to the wider environment for health and medical research. The School of Psychology

(submitted to UoA4) has been one of the strongest in the UK for the last few decades, and has developed a major theme of applied research into health-related areas such as cognitive health and ageing, and behaviour change (e.g. to promote healthy eating). Likewise, the School of Sports, Health and Exercise Sciences (submitted to UoA26) is a leading research unit in the field, and has developed its health-related research in areas such as rehabilitation. The structure of the College facilitates cross-fertilisation of approaches and ideas, which is being evidenced through reciprocal engagement in grants and publications.

In 2009, the Betsi Cadwaladr University Health Board (equivalent to NHS England 'Trust') was created from a merger of three health boards. With 17,000 employees and a turnover of ~£1.2bn per annum, it is the third largest health care provider in Europe. Covering the whole of North Wales, the Board is a major research partner for Bangor University, with collaborative research grants presently totalling over £10M, and 25 staff members engaged in formal joint working roles.

In concert with these developments, we have promoted an expansion of our research excellence in fundamental laboratory sciences underpinning human health. This has been centred on the **School of Biological Sciences**, where health-related laboratory researchers share facilities, infrastructure and methodological approaches. In RAE 2008, we reported the early stages of development of the North West Cancer Research Institute. The Institute has now been fully integrated financially and administratively into the School of Biological Sciences, but -- to acknowledge the key role played by the North West Cancer Research charity in its founding and expansion -- retains its distinct identity through a steering committee. Health-related laboratory science has blossomed with additional investment of over £680k in infrastructure and personnel from the University, the Welsh Government and charities. Our remit has broadened from the fission yeast model (S*chizosaccharomyces pombe*) to incorporate not only human tissue culture, facilitating greater collaboration with clinicians, but now also to include research into the molecular basis of Alzheimer's using the fly system (*Drosophila melanogaster*).

Collaboration across school and college boundaries has been facilitated by the representation of Biological Sciences laboratory scientists on the research committee of the Schools of Health and Medical Sciences and by regular joint research development meetings. In addition to a number of joint postgraduate research studentship projects, research grants captured jointly by staff the two schools exceed £1.5M in value.

The developments between laboratory and applied health researchers are still in the early stages and have not yet been reflected in many jointly-authored outputs of the highest calibre. But strategically we are sufficiently integrated to justify a broad-based interdisciplinary submission in health-related research. Our united strategy will enable us to continue to conduct and disseminate research that is internationally excellent, regionally and locally relevant, and that has significant academic and non-academic impact.

Research themes

Our research strategy encourages the deployment of expertise across three clinical areas: rehabilitation, cancer, and dementia. These are linked by four overarching subject and methodological strengths: implementation research, economics, evidence syntheses, and evaluating complex interventions. Service user engagement is embedded in the design and conduct of the majority of our research. Research capacity and capability development is undertaken by embedding opportunities for staff and students within projects and across groups. This approach is facilitated by networked research development meetings, robust peer review, and enhanced multi-site communications.

Our internationally recognised **Implementation Research** is built on a frequently cited and used theoretical framework (Promoting Action on Research Implementation in Health Services; PARIHS) and a rigorous approach for evaluating interventions that bridge the gap between what is known and what is routinely practiced in healthcare -- the '2nd translational gap.' This work has been underpinned by significant funding from the EU and the National Institute for Health Research and is advancing the evidence base about whether and how interventions work (e.g. facilitation, collaboration) through the application of innovative methods (e.g. mixed methods research, realist evaluation). For example, the Facilitating Implementation Research Evidence (FIRE) programme is a €3M EU Framework7-funded international consortium who evaluated the effectiveness of facilitation as an implementation intervention, and the facilitators and barriers to translating research into practice. Additionally, we are also leading a major (~£600k) longitudinal

NIHR funded investigation that is evaluating the Collaborations in Leadership in Applied Research & Care (CLAHRCs), in which we are developing a new framework for implementation through collaboration. Other major National Institute for Health Research funded work in the implementation science programme that is linked to the clinical area of rehabilitation, includes the Identifying Continence Options after Stroke (ICONS) programme and a national effectiveness trial and embedded process evaluation of Occupational Therapy in Care Homes for Stroke (OTCH).

Knowledge synthesis: In 2011 we founded a cross-university initiative: the Bangor Evidence Synthesis Hub (BESH). Drawing on a range of disciplines including health, social care, environment, and conservation, BESH consolidates our methodical expertise in evidence reviewing and synthesis, including traditional/Cochrane reviews, mixed methods reviews, realist synthesis, and meta-ethnography. Much of this activity is funded by the National Institute for Health Research's Health Technology Assessment and Health Services & Delivery Research including reviews related to wellbeing in later life, qualitative meta-syntheses in cancer care communication and cancer care follow-up, interventions for prevention of teenage pregnancy, and workforce development for care assistants working with the older person. We have played a major role in the refinement, dissemination and application of the technique of Realist Synthesis, the output of which has been cited in international publication standards for reporting on realist syntheses (RAMESES).

Internationally leading **Health Economics** research in Bangor University is particularly known for work in public health and non-pharmacological health technologies, pharmacoeconomics, and pharmaceutical policy. Major achievements include a project to prioritise public health improvement programme budgeting and marginal analysis at an all-Wales level, funding from Health Innovation Challenge Fund (Wellcome and DH) to modernise gastroenteritis surveillance, and economic assessments including the comparisons of Dabitagran versus Warfarin / Prasugrel versus Clopidogrel for Acute Coronary Syndrome. This work has been the evidence base upon which government has made medicines related policy decisions. Our health economists are frequently involved in cross-disciplinary and institutional collaborations in the evaluation of complex interventions funded by the NIHR and EU, including in a study completed in 2011: 'Ascertaining Barriers for Compliance: policies for safe, effective and cost-effective use of medicines in Europe' (€2.2M EU Framework7-funded).

A major collaborative and cross cutting theme, **Rehabilitation**, also involves colleagues from the School of Sport, Health and Exercise Science (UoA26). For example, in addition to examples mentioned earlier related to stroke care, we co-ordinated a £1.4m multi-centre National Institute for Health Research Health Technology Assessment Programme testing whether folate augmentation is an effective treatment for depression. And the Charisma trial, led by Bangor and funded by municipal and national sources, led to the installation of ventilation and central heating as a cost-effective means of significantly improving the quality of life in school children with moderate or severe asthma in a number of homes in the Wrexham area between 2010 and 2012. This project also won an award for the best healthy living initiative from the Association of Public Service Excellence in 2010.

Bangor is internationally recognised for work on psychosocial aspects of **dementia,** which spans all three schools within the College of Health and Behavioural Sciences, supported by expertise in trials methodology and health economics, but focussed within the Schools of Health and Medical Sciences. This has enabled us to undertake major trials funded by the Economic & Social Research Council, Medical Research Council, and National Institute for Health Research of behavioural interventions for dementia including reminiscence therapy, individual cognitive stimulation, bilingualism as a protective factor, challenging behaviour support, and the evaluation of peer support interventions. In the laboratory sciences, a new research theme, funded by the Wellcome Trust and Alzheimer's Society, has been developed to investigate the molecular genetic and developmental basis of Alzheimer's disease using a fruitfly model, focussing mainly on expression of the tau protein.

In the field of **cancer**, Bangor has a growing, interdisciplinary research team including laboratory scientists, applied healthcare researchers, practitioners from the Betsi Cadwaladr University Health Board, and expert statisticians. Translation of findings from bench to bedside is beginning to emerge through partnership, linking to implementation research addressing the T2 gap. Collectively the group has captured around £8m during the REF census period, including major grants from Cancer Research UK, Cancer Research Wales, Tenovus, North West Cancer

Research, and Macmillan Cancer Care. Laboratory studies include investigations of signal transduction pathways, colorectal cancer biology, stem cell biology, DNA repair, cell cycle regulation and chromatin dynamics. The primary care cancer research team has gained substantial national and international momentum with work on timely diagnosis of cancer and safer follow-up, including playing a major role in an 8-centre trial investigating the benefits of endosonography for oesophageal cancer funded by the National Institute for Health Research Health Technology Assessment programme (£1m).

Looking forward: Since RAE2008 our overall aim was to consolidate and then begin to grow in a small number of areas of strength. Our current submission reflects this consolidation and the peaks of excellence achieved thus far; it also provides a solid platform upon which we can grow our future ambitions. Key elements of our strategy post-REF will be to: i) continue to develop capability and capacity in the areas of strength identified in this submission; ii) appoint the best researchers; and iii) support them with outstanding staff and facilities.

We will also look for new opportunities at the intersection of subject areas within and outside of health, building on our established strengths, for example:

- Health, arts, and the environment: use of arts in dementia services; use of music and sound in end of life care and decision making; use of different theories such as 'nudge' to encourage enduring behaviour change related to public health priorities; promotion of sustainable lifestyles.
- Develop fundamental cancer research and intensify our recently established collaborations with clinical scientists with an aim to expand our translational cancer research capacity.
- Bangor Rehabilitation Centre (BReC): drawing on research expertise from across the Schools of Healthcare and Medical Sciences, of Sports, Health and Exercise Science, and of Psychology, this initiative is focussed on physical, social and psychological rehabilitation for those with health problems (including cancer, dementia, stroke) as well as the healthy. It will be the first of its kind in the UK.

c. People (needs cross referencing to Ref 1, 2,3a)

Staffing strategy: Our approach to staffing has been to ensure the vitality and sustainability of our research through the recruitment and retention of high calibre academic staff.

We have strategically built and sustained interdisciplinary critical mass in areas of strength. One example of this was the transfer of a primary care research group from Cardiff to Bangor University in 2011. This was facilitated by £2.2M investment in space and facilities, providing an environment conducive for knowledge exchange and idea development. We have also expanded our expertise in molecular biology through 3-5 year Research Lectureships part-funded by the North West Cancer Research charity and by Welsh Governmental programmes; the Biosciences, Environment and Agriculture Alliance (with Aberystwyth University); and the National Institute for Social Care and Health Research (with Cardiff University). Furthermore, we work with colleagues in the health board to achieve key appointments in strategic areas. There are 25 staff members engaged in joint working with BCUHB, 5 National Institute for Social Care and Health Research Academic Health Sciences Collaboration Clinical Research Fellows and 2 Wales Clinical Academic Trainees at Bangor.

Retention and development of key staff has been effected through: forthright and constructive annual performance development reviews; prioritisation of mentoring of recently-appointed staff by experienced and successful researchers; and strategic allocation of postgraduate research studentships, research fellowships, equipment, technical support and awards of study leave. Success in this strategy is reflected in the promotion of Hughes, Neal, Tudor-Edwards and Rycroft-Malone to Personal Chairs during the REF period. A share of overhead income is allocated to the personal research accounts of principal investigators. This has been used to build collaborations and establish relationships with international investigators, fund pilot projects, and develop teams. Our approach to workload allocation is built upon a principle that excellence should be nurtured. Therefore research income, outputs, supervision, teaching workloads, and administrative roles are collected and analysed at school level to ensure that promising and successful researchers are given sufficient time and space to build excellence.

We have a vibrant meetings and seminar programme both across and within themes, involving international, national and in-house speakers in this programme. Formal research meetings are held regularly both in the overall health domain, and specific thematic areas, with both internal and external speakers. We run a series of research development meetings in the health and medical

areas 6 times a year, as well as bespoke meetings for specific schemes that are led by university academics, researchers and clinical academics. Meetings are video conference linked across sites and to the Health Board.

At an institutional level, Bangor University achieved the HR Excellence in Research Award from the European Commission in 2012, acknowledging our alignment with the principles of the Concordat to Support the Career Development of Researchers. The University's Researcher Development Group is comprised of participants from across the institution, and is currently chaired by a research leader from the Schools of Health Care and Medical Sciences. This group ensures that researchers are effectively supported in their career development. We are building on the Athena Swan Bronze Award (2012) by working towards the Silver Award in the College of Health and Behavioural Sciences. In 2013, the Careers in Research On-line Survey and Principal Investigators and Research Leaders Survey plus researcher focus groups were conducted to ensure we meet research staff needs.

Graduate **research students** are principally organised at School level, but Schools are supported by College Directors of Graduate Studies and are represented at the University's Graduate School Committee. The secretariat is provided by staff from the Research and Enterprise Office, who administer institution-wide programmes including the Knowledge Exchange Scholarship Scheme. This scheme has supported 4 PhD and 1 MRes studentships in the Health and Medical areas, each with a non-academic partner, in the form of a business, charity or agency.

The college Graduate Schools provide interdisciplinary foci for the postgraduate research student experience, complementing the support for students from supervisory teams built around specific projects. The Graduate Schools provide a support structure for the increasing number of postgraduate research students undertaking multi-disciplinary research where this crosses academic schools or research cluster boundaries (e.g. health services research and psychology; primary care and rehabilitation; implementation research and rehabilitation in stroke; laboratory and clinical studies). Within Healthcare, an innovative Professional Doctorate in Healthcare has been developed in collaboration with health and social care organisations, and in response to our experience and work with health professionals internationally. This was launched in 2011 with an initial cohort of 7 students. Through supporting students to undertake implementation work within healthcare organisations, this programme integrates research with impact.

The development of infrastructure support through the College Graduate Schools, and enhancement of research training programmes, has supported the growth of a strong and integrated research culture. In consequence, the number of externally funded postgraduate research students studying in the health and medical fields continues to expand. These fields have benefitted from the University's Anniversary ('125') Scholarship scheme (7 fully funded PhD studentships). In addition, there have been/are 48 students in receipt of competitive doctoral funding through support from the Medical Research Council, National Institute for Health and Social Care Research, National Institute for Health Research, Research Capacity Building Collaboration Wales, Saudi Arabia Government, Cancer Research UK, Welsh Government and research charities such as Tenovus and North West Cancer Research.

In the future we anticipate a major development in postgraduate recruitment from the Welsh National Research Network. Bangor University is a partner in the Drug Discovery and Development Network (co-ordinated by Cardiff University), which will provide 100 studentships across Wales in this strategic area. We are well placed to attract a number of these studentships which will allow us to further increase our research capacity.

d. Income, infrastructure and facilities

Bangor University has secured over £30m public funding towards a £45m Arts and Innovation Centre, representing a major investment in infrastructure for the University and surrounding community. The name Pontio ("bridge") encompasses the strategic programme, the staff involved, and the new building itself, set to open in May 2014. As well as contributing to wider impact of the University, by creating and sustaining over 100 new jobs and contributing an estimated £15m annually to the wider economy, the centre will offer a £9m innovation/engagement space. Whilst in the building phase, innovation development has been taking place, through a focus on three themes. The health research theme unites and builds on Bangor University's strengths across all relevant disciplines, in particular facilitating collaboration across disciplinary, school and college boundaries and externally with a range of academic and non-academic partners. AHRC funding of

£1.2M has already been awarded for a Bangor-led project linking dementia supportive communities and the creative arts, facilitated by Pontio resources.

Further facilities include new areas refurbished through a North Wales Clinical School grant for research offices in the region, including HEFCW funding of £1m to the Brigantia building on the main Bangor site and £250k for Bangor University academic research offices on the North East Wales site in 2009. We work across a dispersed rural campus; therefore, key investment in IT infrastructure and video-conferencing facilities has been made in dedicated academic centres across clinical sites.

Charitable contributions have also been received through, for example, North West Cancer Research, from the BCUHB Charitable fund, to support the 'Diagnose Quickly, Follow-up Safely' cancer programme (£293K), and Macmillan Cancer Support funding (£297K) for clinically linked appointments. Additionally Public Health Wales contribute £180K per annum for carefully targeted research effort to achieve maximum public health impact across the country, such as for contributing to the recent review of health services in Wales.

The Bangor Clinical Trials Unit (NWORTH) is supported by infrastructure funding of £3.3M from the National Institute for Social Care and Health Research. It has been a UKCRC fully registered trials unit since 2007. This investment has led to an active portfolio of over 20 studies with a value of over £14M from the National Institute for Health Research, the ESRC and MRC.

Laboratory-based principal investigators are supported by more than 3 postdocs and 23 PhD students, along with a team of 4 research scientists and technicians. They occupy a suite of recently-refurbished laboratories on a single floor of the Brambell Building in the School of Biological Sciences funded by the Higher Education Funding Council for Wales. Funding totals £4.6M, including grants from North West Cancer Research, Wellcome Trust, Alzheimer's Society, Welsh Government, Cancer Research Wales and Tenovus. Staff are funded from: Cancer Research UK and National Institute for Social Care and Health Research-Welsh Clinical Academic Training, while PhD sponsorship has been awarded by the Kingdom of Saudi Arabia Government, Iraqi Government, Tenovus, and Cancer Research Wales. It has well-equipped molecular and tissue culture laboratories and a fly lab. Facilities include a state of the art Zeiss LSM 710 confocal microscope, a recently purchased Partec Cube8 FACS machine (with additional violet laser configuration), HPLC system (Dionex), DNA imaging and quantification system (Qiagen QIAxcel), a fluorescent imaging system (Biorad ChemiDoc MP) and an advanced Real/time PCR system (Biorad CFX96). Our researchers have partnerships with the Cancer Genetics Biomedical Research Unit in Cardiff, the Liverpool Cancer Research UK centre, and the Howard Hughes Medical Institute in Janelia Farm, near Washington DC. This ensures that our laboratory-based researchers have access to further facilities and services including high-throughput sequencing, imaging and mass spectrometry.

Looking forward, we intend to further expand our interface with the NHS through plans for a new rehabilitation facility: Bangor Rehabilitation Centre. The aim of the facility will be to establish Wales and Bangor as the UK's recognised (and only) Centre of Excellence for researching, designing and implementing exercise treatments and lifestyle behaviour modification.

e. Collaboration and contribution to the discipline or research base

Our Health researchers play ***key international roles*** in administration, co-ordination and collaboration in research. **Woods** is a Board member of INTERDEM pan European network on psychosocial research in dementia, and sits on the Scientific Advisory Boards of Alzheimer Netherlands, Alzheimer Europe and Alzheimer's Disease International. He is also the Alzheimer's Society Ambassador, and was the first non-US winner of the Barry Reisberg award in 2011. **Rycroft-Malone** sits on the Canadian Institute for Health Research knowledge translation, and knowledge synthesis research funding panel, and holds visiting and adjunct Chairs in the Universities of Ulster and Alberta. **Hughes** is Founding President of the European Society for Patient Adherence, Compliance and Persistence, and Chair of the Medication Compliance and Persistence Group of the International Society for Pharmacoeconomics and Outcomes Research. **Noyes** has a role in the international Cochrane Collaboration in global evidence synthesis, and is Co-Chair of its Methods Executive. **Neal** and **Wilkinson** are respectively founding/executive members of the International Primary Care and Cancer Research Group.

Further substantive ***international collaborations*** include **Fleck** and **Hartsuiker** with

Department of Biology, Copenhagen; and Department of Cancer Research and Molecular Medicine, Trondheim. **Noyes** has been working with colleagues in Brazil on a community health worker model of service provision and its translation to a Welsh context. **Neal** and **Wilkinson** work with Aarhus in Denmark. **Rycroft-Malone** led the Bangor arm of a €3m EC funded implementation project with partners in the Netherlands, Sweden and the Republic of Ireland, and is a co-convener of the international knowledge utilization (KU) forum. **Shepherd** is a Visiting Scientist at the Howard Hughes Medical Institute at Janelia Farm in the USA.

Examples of wide ***national collaborations*** include the laboratory scientists' partnerships with Sussex, Cardiff, Liverpool, Manchester and Oxford Universities; and the primary care and cancer group's partnership with Oxford, Cambridge, Edinburgh, Peninsular, and Durham Universities.

Key roles in the ***UK National Institute for Health Research*** (NIHR) include the following; **Wilkinson** chairs the HTA Commissioning Panel for Primary Care, Community and Prevention, **Hughes** and **Wilkinson** are members of the HTA Clinical Evaluation and Trials Board, **Hughes** sits on HTA Programme Pharmaceuticals Panel, **Rycroft-Malone** is a NIHR Health Services & Delivery Research Programme commissioning panel member, and from 2014 will be its deputy chair, and she is also a NIHR knowledge mobilisation fellowship commissioning panel member. In terms ***of other UK funding bodies***, **Burton** is a member of the Stroke Association Awards Committee, and **Hartsuiker** chairs the North West (England and Wales) Cancer Research Institute, and is a member of the North West Cancer Research Scientific Committee. **Neal** is a member of the Roy Castle Lung Cancer Foundation Grants Committee, and **Woods** was Deputy chair of ESRC 2012-13 dementia themed call. **Noyes** Chaired RfPB Wales for NISCHR (2013), and is Deputy Chair of NISCHR Health panel (2013).

The group holds ***substantial UK leadership*** roles. **Rycroft-Malone** Chairs the National Institute for Health and Clinical Excellence (NICE) Implementation Strategy Group. **Hughes** sits on the Health Technology Appraisal Committee for NICE, and the Health Technology Assessment Programme Clinical Evaluation and Trials board (2010-). **Neal** sits on the NICE Lung Cancer Guideline Group. **Burton** is a member of the Intercollegiate Working Party for Stroke, sits on UK Stroke Research Network, is President Elect for the Society for Research in Rehabilitation and the Vice-Chair of the National Stroke Nursing Forum. **Wilkinson** and **Neal** are, respectively Chair and early diagnosis Sub-group Chair for the Primary Care Clinical Studies Group (NCRI). **Neal** is RCGP Clinical Innovation and Research Centre Board Member, DoH Lung Cancer and Mesothelioma Advisory Group, and serves on the National Coordinating Centre – Cancer, Management Board. **Noyes** is Lead Convenor for Cochrane Qualitative and Implementation Methods Group. **Rycroft-Malone** is a member of revised (2013) RCN research & development strategy. **Woods** is Director of the Wales Dementias and Neurodegenerative Diseases Research Network since inception 2005. **Wilkinson** is cancer network lead for UK for RCGP Paper of the Year award, and member of DoH Cancer Survivorship Initiative.

Editorships include: **Rycroft-Malone** was the inaugural editor of *Worldviews on Evidence Based Nursing* (2003-2013), is an Associate Editor for *BMC Trials*, and is on the editorial board of *Implementation Science*. **Noyes** is an Editor of the *Journal of Advanced Nursing*. **Neal** is an Associate Editor for *BMC Health Services Research*. **Hughes** was invited to be a guest editor for *British Journal of Clinical Pharmacology (2010)*, and is an editorial board member of *Pharmacoepidemiology and Drug Safety* and *PharmacoEconomics*. **Woods** is associate editor of *Ageing & Mental Health*.

Personal awards and prizes include **Hartsuiker's** Cancer Research UK Career Establishment Award, **Hughes'** Distinguished Service Award, International Society for Pharmacoeconomics and Outcomes Research, and is an elected Fellow of the Learned Society of Wales, **Noyes'** Honorary UK Cochrane Fellowship, **Neal's** prizes for Society of Academic Primary Care best paper 2008, and RCGP Research paper of the year category winner 2012, **Wilkinson's** Honorary Chair with Cardiff University and **Tudor-Edwards**, **Woods** and **Wilkinson**'s NISCHR Senior Faculty award.

Other roles relevant to Wales impact: **Hughes** holds Deputy Health Economist & Appeals panel roles for the All Wales Medicines Strategy Group; **Wilkinson** is a member of Wales Government Cancer Implementation Group; **Tudor-Edwards** co-founded the Welsh Health Economics Group, and the Welsh Health Economics Support Service (WHESS); **Neal** served on the RCGP Welsh Council and Flintshire Local Health Board.