

Institution: Buckinghamshire New University

Unit of Assessment: 3 – Allied Health Professions, Dentistry, Nursing and Pharmacy

a. Overview

Nursing is a priority research area at Buckinghamshire New University (Bucks). Bucks has a vibrant academic nursing and health-related community with an excellent track record in educating novitiate and experienced health and social care practitioners from pre-registration to doctoral studies. Following the national competitive NHS London tendering exercise in 2011 Bucks was awarded the largest pre-registration adult nursing contract in London on the basis of excellence in educational provision and exemplary stakeholder engagement underpinned by academic partnership, applied research, knowledge transfer and practice development activity. Much of this activity generates advanced scholarship published in professional peer-reviewed journals and is very highly valued by the health community. Research submitted in this Unit of Assessment is organized under the themes of 1) Nursing; 2) Health and Social Care Workforce Development; 3) Public Health and Social Inclusion

b. Research strategy

Since 2008 the Faculty of Society and Health has met the strategic aim of implementing an applied portfolio of research through a partnership approach. From 2010, our strategy has rested on the development of four institutes. These institutes built on earlier strengths to provide a more coordinated and focused approach to research, to provide the managerial, administrative and collegiate structures to support research in the Faculty, and are a visible point of engagement for our external partners and clients. A brief description of the strategic purpose of each institute follows.

The Institute of Research in Nursing (IRN), established 2013, led by Professor Susan Procter, is a formal MoU constituted collaboration between Bucks and our NHS Partner Trusts: Imperial College Healthcare NHS Trust, Hillingdon Hospitals NHS FT, Royal Brompton and Harefield FT, Central and NW London NHS Trust, North West London and Ealing NHS Trust, West Middlesex University Hospital Trust, Hounslow and Richmond Community Trust, Buckinghamshire Hospitals NHS Trust, Royal Marsden NHS Trust, Heatherwood and Wexham Park NHS Trust, Central London Community Health Trust and Engage London a patient and public participation group in NW London. The IRN brings NHS Trusts together with academic staff from the University to identify individual and collective research priorities, collaborate to develop bids for funding, share aggregate data in relation to key performance indicators, share lessons learnt and good practice in relation to harm-free care and to commission local evaluations and practice development projects.

The Institute of Mental Health (IMH), established 2013, led by Professor Colin Martin, represents a partnership and collaboration between West London Mental Health NHS Trust (WLMHT) (including Broadmoor) and Bucks. The IMH aims to develop a programme of collaborative research and scholarly activity linked to Mental Health Trusts and University priorities. These include interfacing physical and mental health within a forensic setting and the interface between primary and secondary care.

The Institute of Vocational Learning and Workforce Research in Health and Social Care (IVLWR), established 2012, led by Richard Griffin, focuses on evaluative research into and development of band 1-4 workforce and on the development and impact of work based learning for all NHS and social care staff. Bucks has been selected as one of only two UK Universities by the Centre for Workforce Intelligence (CfWI) as an academic partner for workforce-related research and horizon scanning. Dr Hughes is Head of Social Care at the CfWI and a Visiting Professor at Bucks.

The Institute of Diversity, Inclusivity, Communities and Society (IDRICS), established 2010, led by Professor Margaret Greenfields, is engaged in a wide range of international, national and local teaching, research and evaluation activities with excluded populations, such as Gypsies and Travellers. The research is focused on: Social Inclusion; Race Equality, Educational Development; Community Cohesion and the Arts; Health Needs Consultations with excluded/vulnerable populations; sensory impairment (deafness); Participatory Action Research; supporting Refugees and Asylum Seekers; Homelessness and Insecure Accommodation; Substance Misuse services;

Faith Based Social Action.

Supported by these institutes, we have fulfilled our strategic aim of implementing an applied portfolio of research through a partnership approach as illustrated below:

Nursing

Extensive international research (Martin) has examined the psychometric properties of a variety of scales. Validation of the domains within the Birth Satisfaction Scale has enabled ongoing monitoring of trends in birth experience, providing a sound foundation for evidencing future patient experience against current benchmarks. Research by Martin has also included psychometric validation of the Self-Care Inventory-Revised (SCI-R) scale for type II diabetes.

A series of studies investigated different methods for managing bowel function in patients with spinal cord injuries (Coggrave). This included an inter-rater reliability of the international Spinal Cord Injury Bowel Function basic and extended data sets. Additional Bowel disease research by Norton included an NIHR funded programme grant to develop an algorithm for the management of chronic constipation; a series of qualitative and quantitative studies exploring faecal incontinence (FI) in inflammatory bowel disease (IBD). As a result FI is now incorporated into patient information provided by the national charity, European guidelines for IBD nurses and Department of Work and Pension's thinking on assessing people with IBD for benefits.

Work on cardiac rehabilitation (Brodie) has provided a baseline for setting new standards nationally and internationally (see impact case study). The ithlete device was shown to be effective in measuring heart rate variability non-invasively, enabling people who have experienced heart failure to control their physical activity. Building on these findings pre-clinical research on cardiac power output is being conducted at Newcastle Medical School. Cardiac power output forms part of the protocol for assessment of patients in heart failure in the Royal Victoria Infirmary and Freeman Hospitals in Newcastle upon Tyne; the Magdi Yacoub Heart Foundation within the Aswan Heart Centre and the Sidra Medical and Research Center, Doha, Qatar (see impact case study).

Health and Social Care Workforce Development.

The IVLWR works closely with the CfWI, Department of Health (DH), Health Education England (HEE), Local Education and Training Boards (LETBs), UNISON, the Royal College of Nursing (RCN), the Royal College of Midwives (RCM) and partner Trusts. Since the formation of the Institute they have undertaken a series of high profile research studies and commissions including:

- a mixed methods study of the factors influencing the future demand and supply for maternity staff, commissioned and published by the CfWI, January-October, 2012, Principal Investigator (PI): Richard Griffin (RG);
- a longitudinal mixed methods study into the effectiveness of a foundation degree for maternity support workers (MSW), commissioned by NHS London, August 2010-December 2012, PI: RG;
- semi-structured interviews to identify factors shaping and constraining the supply and demand for social care apprenticeships and the future supply of personal assistants in social care, both commissioned by CfWI, October 2012-April 2013, PI: RG;
- literature review into factors mediating widening participation into pre registration nursing. Results were integrated into the Cavendish Review (DH, 2013) and HEE's support worker strategy (forthcoming), April-May, 2013, PI: RG;
- mixed methods summative evaluation of the impact of band 3 nursing Health Care Assistants, commissioned by the Belfast Health and Social Care Trust. Results were utilised by the Trust to judge the return on investment in training and improve deployment of the role PI: RG;
- content analysis of MSW (Maternity Support workers) job descriptions, literature review and a focus group defined the roles and responsibilities of MSWs. Commissioned by the RCM.

Research has been undertaken into Nursing (Griffiths) and Social Work (Schaub) practice placements. In collaboration with the University of Cambridge, methods for establishing values-based recruitment of student nurses are being developed (Griffiths).

Building on research funded by the NIHR into the nursing contribution to chronic disease management (Procter) a scoping review of the roles and educational needs of practice nurses across NW London is being undertaken (Procter) as part of a change-management strategy

designed to engage practice nurses in the implementation of integrated care closer to home.

A national on-line instrument is under development to collect student feedback on the learning environment in clinical placements (Procter and Martin).

Public Health and Social Inclusion

Greenfields has been involved in a five-country study, “Inequalities and Multiple Discrimination in Access to Health Care” commissioned by the European Fundamental Rights.

In partnership with Independent Academic Research Studies (IARS), work is on-going to train and support young refugee and asylum-seeking women (some of whom who have experienced sexual violence in their countries of origin) to undertake research on the health and legal advice-seeking strategies of their peers (Greenfields).

The accuracy of professional judgment was compared to actuarial risk assessment tools assessing risk of re-offending, in particular for those at risk of committing violent or sexual crimes (Ansbro).

Service user engagement: key to all our activities this forms a strong component of our educational provision and research engagement. We have a formal partnership with Engage London which is a service user and community engagement organisation (see impact template). Work on service user engagement by Greenfields has been cited as ‘best practice’ by The Fundamental Rights Agency and INVOLVE for research with ‘hard to reach’ communities, and the programme of engagement she developed has been widely replicated across the UK in both accommodation and health/employment needs assessments (see impact case study).

Future Objectives

Building on the four established institutes, our strategic objectives for the next five years are to:

- engage with our community and service partners to co-design and establish best practice and to undertake research into the effectiveness of practice innovations and service improvements in line with practice partner priorities;
- double our existing research income and to further develop our national and international collaborations which enable access to major funding opportunities;
- double the number of academic staff with a PhD for the next REF submission;
- double the number of research active staff publishing in REF returnable journals for the next REF submission;
- increase the proportion of research students undertaking research
- build on our unique combination of policing, social work and health to develop shared research agenda in areas such as safeguarding and realising effective professional cultures to further our national and international contribution to integrated care;
- become a national centre of excellence and gain international recognition for our applied research into and development of the band 1-4 workforce;
- extend our social inclusion research to other marginalized groups.

c. People

i. Staffing strategy and staff development

The University has a scholarship culture that underpins evidence-based teaching and translational research. The Faculty Strategy requires that all job descriptions and person specifications for new appointments include research and publications and this now forms a key part of our promotion criteria. Additionally each school has been given an annual target for increasing staff engagement with research and reducing face-to-face classroom teaching while improving the quality of the student learning experience.

Over the current assessment period the University has experienced staff turnover. Departures include Professor David Brodie who retired and Professor Christine Norton. The appointment of Professors Sines, Procter and Martin reflect a consolidation of the Faculty research strategy in relation to this Unit of Assessment in line with the University Research strategy of applied research requiring partner engagement. Sines, as Dean, has ensured that both Procter and Martin hold joint

NHS posts.

Clinical Academic Careers: We are building an infrastructure with our local partner Trusts designed to address the numerous obstacles experienced in developing clinical academic careers and taking the learning from the partnerships back into our respective organizations. We are ensuring that all our staff recruitment, teaching and learning, staff development, post-graduate and doctorate strategies pre-dispose towards enhancing clinical academic career development. For instance Faculty investment in PhD students in nursing prioritises joint clinical academic contracts for doctoral students. The above strategy builds on the achievements of Professor Norton. While at Bucks she secured £197k funding from the NIHR to support a mentorship programme for nursing & AHP clinical academic fellows with Imperial College, The Academy of Nursing, Midwifery and Health Visiting, and the University of Hertfordshire.

All of our Institutes benefit from the appointment of Visiting Professors. For instance Dr Hughes, Head of Social Care at the CfWI, is a Visiting Professor at Bucks working closely with IVLWR. Dr Theo Gavrieldes, founder of Independent Academic Research Studies (IARS) works with IDRICS and our Psychology Department in the area of restorative justice. Our partner Directors of Nursing all have Visiting Chairs and are active members of the IRN Board. We are also developing a number of visiting clinical research fellows within the IRN who work closely with us on research applications and on the dissemination of research into clinical settings.

The University belongs to the Consortium for Research Excellence, Support and Training (CREST), a sub-group of GuildHE initiated to support the career development of researchers. Researchers collaborate across institutions within the group to develop symposia, seminars and other forms of peer review and support to allow mentoring of early career researchers (ECRs) both within and beyond their institutions.

The Faculty runs an annual research challenge fund open to all academic staff. Staff are invited to submit proposals for research (35 projects were submitted in 2013). The proposals are reviewed externally and funding is awarded following consideration by a panel. Funding from this source is dependent upon evidence of successful publication if the applicant(s) have previously received Faculty funding to support research. In excess of £250k has been allocated to this activity since September 2012. Staff undertaking doctoral programmes can apply to this fund to support their studies including backfilling teaching to support data collection, analysis and writing up, transcribing interview data and support with statistical analysis.

We are actively developing strategies for engaging staff in the peer review process including monthly writing workshops and involving both University and Trust staff in the review process for the allocation of the research challenge fund. Additional funding is available for staff to attend methodological courses focusing on qualitative and quantitative research, training in statistical analysis and national and international conferences where they present research outcomes.

Equality and diversity considerations continue to be embedded into our working practices, with more individuals taking advantage of our flexible working policy and equality policies. An example of the implementation of our equality and diversity policy is the home working arrangements put in place by the University which enable one of our Research Assistants (RA) to work from home. Without these arrangements the RA would not be able to maintain her employment at the University.

In addition to staff submitted in this REF we have a further 7 post-doctoral academic staff who will be supported to become ECR during the period of the next REF by allying them to existing research groups, supporting them to apply for research challenge funding in line with research group priorities, and supporting them to supervise PhD students. We have a further 11 academic staff undertaking doctoral studies who will be supported to become ECR once they complete their doctorate.

ii. Research students

During the REF period 15 students have obtained PhDs allied to this UOA including work on cardiovascular disease, telehealth, mental health, and service user engagement. Our graduating doctoral students have often gained immediate employment, as academics in leading Universities (including Oxford, Newcastle, Essex, Leicester and Alberta), with others employed as clinicians or researchers within the NHS.

At the beginning of their research students complete a 'Working Agreement' which, in addition to detailing student and supervisor responsibilities, also requires students to assess their own skills using the Vitae Researcher Development Framework online planner (purchased through a CREST agreement). This is then discussed with their supervisors and training and development priorities are agreed. Developmental progress is reviewed on an annual basis with a panel (chaired by a senior researcher) and new research objectives are agreed for the coming year. Employability skills are addressed as part of this review, and strengthened by the requirement for research students to present an updated CV as part of their Annual Review.

The Faculty has developed a Professional Doctorate which provides a series of taught modules which are also available to all research students. This core series of modules is supplemented by a regular series of seminars, training events and colloquia to which students, staff and external speakers contribute.

Under Professor Brodie a number of students were trained in the use of complex metabolic systems and the use of equipment such as the Sphygmocor, the Innocor, and the Heartmate left ventricular assist device.

Students are also encouraged to present at national and international conferences and to publish their work in high-impact journals. Bucks research students receive University funding to enable attendance at CREST events. During the period of the REF we received £39k from Crohn's & Colitis and £26k from Crohn's & Colitis to support a researcher to undertake her PhD at Bucks in conjunction with North Bristol NHS Trust.

c. Income, infrastructure and facilities

The Faculty has appointed a Dean for Enterprise and Business Management who takes lead responsibility for identifying research, tendering and other funding opportunities. Much of the income in the Faculty is derived from undertaking work locally for the NHS, social services, local Authorities and charities. Links with industry are also encouraged and we are working closely with the wealth creation themes of both the Oxford and Imperial Academic Health Science Networks. We also have extensive EU links.

Examples of income generated include:

Martin has been awarded £126k KTP funding with the Scottish Funding Council to undertake an evidenced-based assessment, monitoring and intervention package for individuals with alcohol-related brain damage. He is a named collaborator on a £5,000k DH grant awarded in 2010 to the National Perinatal Epidemiology Unit (NPEU) at Oxford University. He has also received €400k from EU ERASMUS Multilateral, Lifelong Learning Programme: Family Health Nursing in European Communities.

While at Bucks, Norton secured a total of £1,033k research income for her work on bowel disease and the development of clinical academic careers; much of this was managed through NHS organizations. It included £100k from the NIHR for a Programme Development Grant:

Development of a UK evidence-based algorithm for management of chronic constipation and £248k plus a £50k extension grant from Research for Patient Benefit for a nurse-led management of radiation Proctitis (co-investigator Andreyev, Royal Marsden Hospital). As part of her joint post with Imperial, Norton secured £392k for a variety of projects aimed at increasing research capacity and improving the quality of the in-patient experience. Building on this work, Procter and Norton have just been awarded £176k by the Burdett Foundation for a project titled "Delivering Dignity through Empowered Leadership" based in Imperial Healthcare NHS Trust.

During the period of the REF Procter was awarded £300k for a Service Delivery and Organisation funded project on 'Developing the role of Practice Nurses to support Long Term Conditions' and £45k ESRC funding to investigate primary care led commissioning. Sines has received £21k to evaluate the effect of waking night staff in supported living accommodation for people with learning disabilities in Southwark (CHOICE Support).

Sines and Griffin have received a total of £63k funding from the DH and local educational commissioners to scope and develop the role of the band 1-4 workforce in healthcare and to scope the future assistant/apprenticeship workforce in social care. They have also received a total of £190k to undertake a range of workforce-related projects looking at international models of health care student support, redesign of the non-medical NHS Theatre workforce, scoping the future

midwifery workforce and social work workforce.

Research Infrastructure and facilities: Research in the Faculty has benefited from donated equipment from Advanced Medical Diagnostics (TF5 heart rate variability system) and Akern Bioresearch (bioimpedance analyser). The value of the donations is in excess of £73k. Access for research has also been given to NHS equipment (e.g. treadmill, ECG equipment and metabolic analyser at the Transplant Unit at Harefield Hospital).

Led by Pheby, a Visiting Professor at Bucks, we host the National ME Disease Register. This is one of six subprojects within the National ME/CFS Observatory funded by the Big Lottery and sponsored by Action for ME.

Researchers and students have access to world-class fully equipped clinical skills labs/specialist equipment with state of the art video simulation facilities. A new library contains many bookable study/meeting rooms, with internet and visual display capabilities. All full-time PhD students have a personal desk and IT facilities; part-time PhD students have hot-desk facilities with a computer available at each desk. PhD students have access to a range of supportive software packages including NVivo and SPSS. Research is supported by a dedicated Research Unit who provide administrative support for researchers and the doctoral programmes. Dedicated Faculty space was made available to Brodie to house the equipment used to undertake the cardiac power output research.

Research Governance: The University is committed to upholding the highest standards in its research and to being fully compliant with the DoH Research Governance Framework for Health and Social Care. The University Research Ethics Panel is chaired by a visiting professor, Dr Walters, Director of Nursing, Midwifery and Infection Control, King's College Hospital. This panel meets monthly and reports to the University Research Committee which is responsible for broader policy decisions relating to ethics and governance. Research requiring IRAS R&D ethics approval is routed through the Research Unit where arrangements are made for proposals to be scrutinised to ensure they meet University requirements before they are considered for sponsorship.

d. Collaboration or contribution to the discipline or research base

We have an extensive range of productive collaborations and partnerships.

We have had a professorial partnership with Imperial College Healthcare Trust since 2009 initially held by Norton and now by Procter. This has been successful in initiating research into improving the patient experience of hospital care and in supporting nursing staff in Imperial College Health Trust to apply for NIHR fellowships. Procter is working with the Biomedical Research Centre at Imperial to establish a funded career pathway for nurses, allied health professionals and pharmacists to support promising academic clinicians from qualification through to post-doctoral research.

Procter has been invited to be a visiting Professor at the University of Hobart in Tasmania, Australia and has undertaken external PhD examining at the University of Ballarat, Australia. As part of the NIHR study into the nursing contribution to chronic disease management a collaborative international panel was established consisting of Prof Thorne (University of British Columbia, Canada), Prof Wellard (University of Ballarat, Australia), Prof Paterson (University of New Brunswick, Canada), Prof Kralik (Royal District Nursing Service, Australia), Prof Sigurðardóttir (University of Akureyri, Iceland), Prof Morales (School of Public Health of Andalusia, Spain). Procter gave a joint keynote paper on European perspectives on the future management of long term conditions at the International Symposium on Community Nursing Research in Granada, Spain with Prof Morales.

Martin has a joint post with the West London Mental Health Trust. He is also working with the National Perinatal Epidemiology Unit (NPEU) at Oxford University. This multidisciplinary group comprises statisticians, epidemiologists, psychologists, psychiatrists, and health economists. His work with this group has contributed to the development of a number of health measures. His outputs are defined by interdisciplinary working, with a focus on the interface between physical and mental health requiring interdisciplinary collaboration.

Martin has extensive international collaborations in relation to integrative physical-mental health care. These include establishing a collaborative centre supported by an EU grant for a Family Health Nursing project comprising 14 European partners. He also has extensive collaborations in Hamburg and Hanover including PhD students and University partners. Recent PhD completions from these collaborations focus on an exploration of the neuropsychological aspects of eating behaviour in

children at risk of obesity through the examination of evidenced-based interventions. Martin has extensive links with colleagues at the Australian Catholic University, Deakin University, University of Canberra and the University of Melbourne. Martin has also established collaborations with colleagues at the University of Pittsburg and Washington State University in the United States.

Coggrave is on the editorial board of the British Journal of Neuroscience Nursing and is an expert reviewer for DH/NIHR grants, the Catalan Agency for Health Information and the MS Society. She is Chair of the Bowel Care Group under the aegis of Multidisciplinary Association of Spinal Cord Injury Professionals responsible for developing and publishing guidelines for neurogenic bowel management. She was a member of the Global Bowel Management Advisory Board and is Chair and founder of the Neurogenic Bowel Research Support Group. She has research collaborations with the University of Sydney, Australia.

Greenfields has an established network of national and international collaborations including the University of Bristol, Sheffield University, De Montfort University, Anglia Ruskin University and partners at the Corvenius University, Hungary, University of Kent, UNISA (Pretoria) and the University of Zagreb. In addition, Erasmus agreements are under development with the University of Pecs, Hungry and Western Romanian University and projects are under early stage development with staff at the Universities of Cambridge, Oxford, Warwick and UNISA (South Africa).

The research into cardiac power output (CPO) was co-ordinated by Professor Brodie of Bucks New University during the period 2004 to 2012. The team included Professor Sir Magdi Yacoub, (Heart Science Centre, Harefield Hospital) and Professor Emma Birks, (currently Director, Heart Failure, Transplant and Mechanical Support Programme, University of Louisville). Prof Sir Magdi Yacoub is collaborating with members of Brodie's team to establish the use of CPO in an exercise physiology laboratory in Egypt (see impact case study). The incidence of iodine deficiency disease has now been established for many areas in Nepal and Brodie's team have shown that the deficiency in schoolchildren can be eliminated by the administration of iodised salt over a six month period. Information technology has been shown as a positive adjunct for cardiac rehabilitation both in the UK and India.

Sines was previously Director of Nursing and Secretary of State Appointed Member of the UKCC and Nursing and Midwifery Councils; Director of the British School of Osteopathy; Associate Non-Executive Member of the Buckinghamshire Healthcare NHS Trust; Honorary Director of Nursing with Imperial College Hospitals NHS Trust; member of various NHS national and regional education and workforce committees; Lead Director of the Thames Valley Health Innovation and Education Cluster. Non Executive Director CLCH; Member of the Stakeholder Advisory Council HEE NW London and previously member of the NHSL Workforce Board.

During the REF period Procter has been an expert reviewer – NIHR, Canadian Foundation for Health Care Improvement, Editorial Board member for the Journal of Nursing Management 2000-2009, Primary Health Care Research and Development, Member of the GNC Grant awarding body.

Martin is an Expert Reviewer - Journal of Reproductive and Infant Psychology and Honorary Consultant Psychologist to The Salvation Army (UK and Eire Territories).

Norton is Associate Editor: Frontline Gastroenterology (BMA Publishing) Section Editor (lower bowel dysfunction), Neurourology & Urodynamics (Wiley Liss, USA). Co-editor, Cochrane Incontinence Group: Cochrane Collaboration. Member, Journal Wound Ostomy & Continence Nursing Editorial Board (Lippincott Williams & Wilkins, USA). Regular reviewer for: Gastroenterology; International Journal of Nursing Studies; Journal of Advanced Nursing; Diseases of the Colon & Rectum; Nursing Standard; Alimentary Pharmacology & Therapeutics and many others. During the period of the REF she was Keynote speaker at the Arctic Pelvic Floor meeting, Norway, June 2010; and the RCN Research Conference 2010, (Gateshead), 'The realities of a clinical academic career in nursing'.

Griffin is assessor for the health department in Northern Ireland for applicants to their funded doctorate programme. Expert reviewer Journal of Workplace Learning and the Widening a Participation and Lifelong Learning journal.