

<p><b>Institution: University of Chester</b></p>
<p><b>Unit of Assessment: 3 Allied Health Professions, Dentistry, Nursing and Pharmacy</b></p>
<p><b>a. Context</b></p> <p>This Unit consisting of Allied Health Professions (AHP) and Nursing has made significant progress on research impact since 2008. We have:</p> <p><b><u>Developed four distinct groups of research whose outputs have had impact on the experiences of groups and individuals</u></b></p> <ol style="list-style-type: none"> <li><b>The Women's Health Group</b> has impacted on developing the knowledge base of midwifery practice through commercial consultancy, user friendly books for parents and textbooks for student midwives as demonstrated in the work of Steen-Greaves. The Group has also contributed to the understanding of disclosure in domestic violence. Keeling's study reported where violence is most likely to occur within a woman's cycle of pregnancy and this has been translated into international conferences, papers and a textbook.</li> <li><b>The Mental Health and Learning Disability Group</b> is an established team of researchers, working in a number of key areas including service user involvement, forensic learning disability issues, cognitive behaviour therapy, violence and self-injury, physical health care and learning disability/mental health. The development of the Global Mental Health Assessment Tool (GMHAT) by Sharma is a revolution in the identification and subsequent treatment of people with mental disorders. The Group is currently evaluating the effectiveness of GMHAT in North and South America, India and Europe. The use of GMHAT is now extended to non-medical practitioners, particularly those working in remote areas where traditional diagnosis of mental illness by trained doctors is not always possible and has facilitated quicker referrals to the hospital or psychiatrist.</li> <li><b>The Health Education and Practice Development Group</b> embraces research from areas impacting on practice improvement for health benefits. Critical to its success has been the collaboration with FOCUS (Forum of Carers and Users of Service) and their relationship with the Group as advisers and links to relevant patient groups. Pedagogical research has developed considerably since 2008 and this is borne out in its research and extensive publications, conference presentations, papers, chapters and textbooks. The Group has contributed to the patient and staff experience in a number of notable ways, examples include the work by McIntosh-Scott and Gidman, the development of a patient forum to enhance patient involvement from a formal research grant, and pedagogical grants to enhance student support in academic and practice settings and support staff submitting knowledge transfer and pedagogical research bids.</li> <li><b>The Clinical Science Group</b> utilises biomedical and physiological tools for the assessment of health and disease, for example the consequences of moderate vitamin B deficiencies and the potential for utilising vitamin B<sub>12</sub> and novel derivatives in the treatment of dementia including Alzheimer's Disease resulting in production of a novel vitamin-based supplement by a local company. The Group's work has demonstrated its success by the extension of a research grant that has already identified the chemokine receptor CCR9 and CCL25 on monocytes present in patients surviving rheumatoid arthritis. These findings are rooted in earlier discoveries by the group within the area of stress protein biological research who have shown how understanding stress protein regulation processes can be utilised in authentic therapeutic approaches.</li> </ol> <p><b><u>Developed a cohesive multi-disciplinary approach, rooted in clinical &amp; professional practice</u></b></p> <p>The Unit has developed a demonstrable track record of collaborating with a range of agencies from charities (e.g. Age UK) and government bodies. The Strategic Health Authority, for example, have funded research that is investigating the impact of the benefits of service users and carers to the practice assessments of student nurses in practice and universities. The Practice Development and Research Partnerships (PDRPs) are multi-disciplinary, promoting collaborative research between clinical practice and the University - examples include our work with the local renal unit and user groups to improve the patient experience.</p> <p><b><u>Developed expertise in far-reaching health research methodologies that has produced outputs that make a difference to lives and learning</u></b></p> <p>The Unit embraces a portfolio of researchers engaged with a comprehensive range of research methodologies. The breadth of this research expertise is demonstrated clearly in our publications where quantitative and qualitative approaches address the diverse range of topical research questions and areas of enquiry. Subsequently, the Unit recognises, and is well placed to pursue, both positivist scientific exploration through quantitative approaches and the employment of qualitative methods seeking to understand the complexities and sensitive nature of the human</p>

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experience. Lovell's work has focused on self-injury in those with a learning disability and his emphasis is on a new conceptualisation of self-injury as a 'career' which becomes progressively entrenched over time. It is a discovery which is in direct contrast to the traditional emphasis on biological and behavioural explanations. The research, utilising *case study methodology*, has subsequently been extended to the issue of clinical violence in three more studies. This has developed further to examine the roles of staff in caring for those within a low secure learning environment with a history of self-injury and violence.

**Developed a health research profile that is international in its vision and responds to the local and national change agendas**

Since 2008, the Unit has demonstrated a growth of research and development partnerships from the 'local' to the 'global'. On national and international levels the Clinical Science Group have responded to the public health agenda with vigour, and their research in food, exercise and obesity has resulted in a number of impacts. Buckley's research on prevention of cardiovascular disease has resulted in his contribution to national education programmes. Williams, Bonwick and Ireland's research on a variety of food products has resulted in some innovative assessment measures that are impacting on food quality and public health issues. The biomedical research of Hughes, Ireland, Mushtaq and Williams is addressing issues of importance to the clinician and aims to improve monitoring in cancer and inflammatory diseases like diabetes. Additionally, Kennedy's and Ellahi's work has also examined public health food interventions specifically with regard to ethnic groups and Kennedy's contribution to health advocacy has directly influenced local planning legislation.

**b. Approach to impact**

The Unit has made significant progress in its approach to impact. We have:

**Created an environment of research excellence**

The research excellence of the Unit is embedded within the mission of the University, "... an open, inclusive and supportive environment guided by Christian values of honesty, integrity and respect for all, we seek to provide our students and staff with the education, training, skills and motivation to enable them to develop as individuals and have lives of service in the communities within which they live and work." The application of the mission provides a framework and philosophy for a supportive research environment and infrastructure that respects and encourages collective and individual research endeavour, benefiting the community and the University. This research environment promotes excellence at each level of the researcher's journey from the undergraduate to senior members of academic staff. The impact of our research activity is rooted in established traditions of the University where relationships with external stakeholders have a reputation for delivering high quality research reports. Such an example is Cooper's work on diabetes. She identified an urgent need to redesign diabetes health services for young people in the UK, which has the fifth largest paediatric diabetes population in the world with no standardised approach to care. The Adolescent Diabetes Needs Assessment Tool (ADNAT) App is the first intervention of its kind filling a recognised gap in UK service provision. Evidence from the underpinning research programme that has studied adolescent diabetes self-care and explored technological methods of learning, has guided the development, validation and clinical evaluation of ADNAT which has now been included in the UK's 2013-2018 National Paediatric Service Improvement Delivery Plan.

The continued growth in Unit staff being invited to co-supervise PhD students from other universities demonstrates our environment of research excellence: Fallows has a record of successful PhD supervision of students from overseas, where the outcome has been to enhance patient care particularly in cardiovascular rehabilitation.

**Strengthened partnerships, internal and external to the University**

The University mission is fundamental in attracting, promoting and strengthening partnerships within the Unit. Collaborations have been forged between faculties and departments to develop relevant and cohesive research teams, bringing together the research interests and areas of expertise to deliver high quality investigative studies and also postgraduate research degrees and joint doctoral supervision. The well-established research seminars delivered by the Unit, some of which are public lectures, promote knowledge of the research work at a wider level, and inform colleagues and associates of the research studies being undertaken. Additionally, the annual postgraduate research conference showcases the work of our doctoral students. The Unit produces well developed and socially responsible research, such as that carried out in diabetes and learning disability. Equally, the Unit collaborates with other significant institutions and

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universities in the UK and abroad for example The Countess of Chester Hospital, Herman Memorial Hospital, University of Salford, University of Central Lancashire, King's College London, Imperial College, and Delta Meghe Institute of Medial Science, Nagpur. Promoting, supporting and valuing initiatives are important developments of the Unit and examples can be found in the number of PDRPs which support research endeavour in partnership institutions, particularly hospitals and Special Interest Groups, encouraging academic staff to pursue their research interests, all of which are rooted in the University Research Strategy.

The research groups of the Unit work within a framework provided by the University and Faculty research strategies. Academic staff are aware of and connected to the relevant developments, changes in policy, and innovations and initiatives in their research areas. Esteemed researchers may be invited to conduct research or apply for funding in their research areas.

The growth of PhD studentships is a significant area of research development, provision and impact, often arising from the increasing number of prominent researchers in the Unit, who by reputation are attracting students both nationally and internationally. An example is a PhD student requested to be supervised by Steen-Greaves, whose specialist field is in the healing of perineum following childbirth. It is anticipated that this student, who will be one of the first midwives working in Nigeria to have a doctorate and whose research findings will provide the evidence to enhance and change practice, will make a real difference to many women following childbirth.

**c. Strategy and plans**

The strategy and plans of the Unit are continued expansion and growth that remain in keeping with the mission, research governance and strategies of the respective Faculties. The development of strong areas of research activity both in subject and method, show that the Unit is committed to and demonstrates research excellence, serving local, national and international communities. Significantly, the Unit is demonstrating that group collaborations are a productive way forward - Williams and Mason-Whitehead are both researching different aspects of bowel cancer, employing quantitative and qualitative approaches and embracing clinical and academic researchers. Williams's is currently funded by the Bowel Disease Foundation for a study entitled '*Targeting heat shock protein 27 in colorectal cancer*' and Mason-Whitehead was invited to co-supervise a PhD student based at King's College, London. The research is demonstrating a decisive link between inflammatory bowel disease and perceived stigma, a unique contribution to clinical bowel care. Both researchers are working on a joint bid to develop new strategies to improve the quality of life of bowel cancer survivors. The Unit is now attracting some of the most able researchers and is developing a new generation of researchers engaged in vibrant and exciting research and research methodologies, including, for example, visual research and case study research.

Plans for the future can be summarised as follows: continued development of infrastructure for research activity and postgraduate research supervision; substantial grant acquisition; continued development of research collaborations in the UK and abroad securing the Unit as a serious competitor in global research; continuation of serving the community through research studies that support emerging and established stakeholders; targeting publishing and having a sustained and measurable impact on a variety of academic and clinical audiences. Finally building on a reputation which is rooted in the University mission that conducts research that is fair, ethical and visionary.

**d. Relationship to case studies**

The case history presented by Williams demonstrates the considerable progression of the Unit since 2001 and 2008. His work in Alzheimer's Disease is mindful of the Unit's vision of responding to the changing health agendas for policy reform and clinical excellence and collaborations with international universities and manufacturers have taken his work from the 'laboratory to the patient'. Whilst the Unit embraces different research methods and approaches it has a shared vision of being driven to engage with research that impacts on the lives of society's most vulnerable people. Buckley's case study provides a growth of understanding and application of his research into the effective management of exertion intensity, symptoms and pain in cardiovascular and neuromuscular diseases resulting in the setting of national and international standards for safe and effective education and training and professional practice. Finally, Cooper's case study demonstrates her dedication to research on diabetes resulting in a practical application. Cooper's Adolescent Diabetes Needs Assessment Tool (ADNAT) now used widely by young people with diabetes is representative of this Unit, where commitment to high quality research and vulnerable groups is only viewed as complete when the positive impact on people's lives is demonstrable.