

## Impact template (REF3a)

<b>Institution:</b> Cardiff University
<b>Unit of assessment:</b> A2
<b>a. Context</b> <p>Cardiff University researchers in this unit have risen to the challenge of researching “hard to reach” groups, intervening with the most difficult to change health behaviours that have resulted in high levels of chronic health problems. The Unit comprises of researchers from clinical medicine, epidemiology, public health, statistics, psychology, sociology and trials methodology, with a common focus on individual and population health. The main beneficiaries of the research reported in this unit are health care professionals, policy makers and the third sector, and through them, patients, their families, school children and the general public. Much of our research is grounded within a population that has high levels of post-industrial deprivation and inequality in health and well-being and has implications for all industrial and post-industrial societies. The research context benefits from a strong policy framework; Wales has a devolved Government with responsibility for health and a very strong commitment to improving population health and reducing inequalities. Our research is fine tuned to policy needs of Welsh, UK and European health and social policy imperatives, and is also internationally applicable. Our case studies provide examples of how our research has (i) changed clinical prescribing behaviour for antibiotics and promotion of self-care (ii) standardised clinical practice, training and legal decisions to improve the recognition and protection of children from abuse or neglect, and (iii) improved consultation about health behaviour change (e.g. diet, exercise, smoking, healthy eating) to benefit patients and practitioners.</p>
<b>b. Approach to impact</b> <p>This Unit’s research is underpinned by a clear impact pathway, beginning with clinical problems challenging the NHS and public health problems challenging government. We have focussed on questions that relate to our internationally recognised research strengths that are influential with policy makers.</p> <p>Our research programmes also link to a wider context within Cardiff University’s School of Medicine. Pathways to engagement and impact are facilitated through the TIME (Translation, Innovation, Methodologies and Engagement) Institute established in 2011, to act as a focus for delivering translation through training, and identifying opportunities for entrepreneurial aspects of research. The Unit has two representatives (Mayor and Rollnick) on the School’s Innovation and Engagement committee, promoting awareness of our research output to the general public, specific interest and patient-carer groups. We are actively developing our engagement and impact policy and have identified action plans for key beneficiaries:</p> <ol style="list-style-type: none"><li><b>1. The public:</b> Researchers welcome the requirement to develop relationships with non-academic potential users of the research outputs, at project development stage to ensure that the research is policy and practice relevant. We invite users to become members of project advisory or steering boards. We make findings and outputs developed from research available online for clinical users and members of the public. For example, Kemp and Maguire’s work in conjunction with the National Society for the Prevention of Cruelty to Children makes available to health and social care professionals and members of the public, the best and most up to date evidence about child protection, to help inform understanding of child protection issues and associated complex decisions (<a href="http://www.core-info.cf.ac.uk">www.core-info.cf.ac.uk</a>). This team were awarded the 2013 BMJ Improving Health Awards’ Child Health Team of the Year.</li><li><b>2. Patients:</b> Promoting relationship based medicine is an explicit component of our mission. We make available the materials we develop for use by patients whenever possible, and aim to embed these materials into clinical practice as interactive tools. For example, our interactive booklet produced by Francis in the EQUIP study is designed for use within consultations for children with respiratory tract infections. The booklet is personalised during the consultation through a process of clinician-parent discussion, and then taken by the parent for reference at home. In developing our commitment to enhanced shared decision making in medicine, we have developed and evaluated online decision support tools to help patients make more</li></ol>

satisfactory decisions about their care with regard to amniocentesis (Amniodex.com), prostate hypertrophy (Prosdex.com), and management of breast cancer (Bresdex.com) (Edwards and Elwyn). Target stakeholders (the public, health and social care professionals, commercial partners, commissioners and policy makers) were engaged to inform the development of these decision support tools, which have been licensed by Cardiff University to NHS Direct in 2010. These tools are being used across the NHS in the UK and in Europe (Amniodex 2500 visitors to the site in 2012; Prosdex has been translated into German by one of the biggest German insurance providers (Allgemeine Orts Krankenkasse) with the University of Bremen and the German Cancer Prevention Centre <http://www.aok.de/portale/bundesweit/psa/content/>).

- 3. Health care professionals:** For effective relationship based medicine, evidence based practice including uptake of effective interventions needs to be developed and enhanced. A major focus therefore has been on developing '*blended learning*' programmes aimed at clinicians to improve clinician-patient interaction, so that clinics can implement evidence based decisions while empowering patients to be effective decision makers about their own care. These programmes have been based on the principles of motivational interviewing, a counselling approach that we have helped to develop which aims to build on decision makers intrinsic motivations. We have developed and evaluated three blended learning programmes that incorporate on-line learning, face to face seminars and practice with simulated and real patients for promoting evidence based antibiotic prescribing (the MRC Funded Stemming the Tide of Antibiotic Resistance (STAR) study <http://tiny.cc/starstudy>), improving communication in paediatric diabetes care (the HTA funded Development and Evaluation of a Psychosocial Intervention for Children and Teenagers Experiencing Diabetes (DEPICTED) study <http://tiny.cc/depicted>), and increasing the frequency and effectiveness of behaviour change counselling in primary care (the NPRI/MRC Preventing disease through opportunistic, rapid engagement by primary care teams using behaviour change counselling (PRE-Empt) study <http://tiny.cc/pre-empt-study>). The learning programmes are available on line ([www.3trials.net](http://www.3trials.net): login = guest10@cf.ac.uk), and we are working with our commercial partner, Smile-on, to develop a platform for updating and disseminating these programmes. Butler and colleagues were shortlisted for the 2013 BMJ Improving Health Awards' prestigious Research Paper of the Year for the STAR study, which recognises 'outstanding original research that has the potential to contribute significantly to improving health and health care'. A contract has just been signed where our SME partners (Healthcare Learning: Smile-on) are investing £50K in further development, commercialisation and roll out of the STAR Study blended learning intervention.
- 4. Policy makers and the UK National Health Service:** In addition to developing tools for decision support that have been taken up by the health service, we have supported several of our unit members to hold influential positions in NHS organisations. Houston has been a Non-Executive Director for the Aneurin Bevan Health Board, where, since 2008, she has promoted integration of primary care with secondary services. Fone, Paranjothy and Palmer are on secondments to the NHS - Public Health Wales NHS Trust to strengthen the link between academia and service public health. Paranjothy and Palmer have been working through Public Health Wales NHS Trust with policy makers at Welsh Government to inform the 'Early Years and Childcare Plan for Wales'. Dissemination of the significance of our research for policy and practice is facilitated by close links (as shared appointments, membership of expert committees and as expert advisors) between senior Cardiff University researchers and Local Authorities, the NHS, Welsh Government and nationally and internationally through the Department of Health, European Commission and World Health Organisation. For example, Palmer has had a formal appointment with Public Health England and Public Health Wales NHS Trust to provide advice on health protection and in Wales on Early Years Health. Butler was a GP member of the Department of Health National Expert Panel on New and Emerging Infections, and Palmer was an expert in zoonoses until 2010. Butler has advised the Welsh government on a new screening programme for over 50's, and has contributed to Bevan Commission workshops on the direction of primary care in Wales.
- 5. Schools:** We prioritise engaging with schools and school children because early intervention has the greatest potential for long-term benefit. Our trial of peer led interventions against smoking in schools (ASSIST: A Stop Smoking in Schools Trial <http://decipher.uk.net/en/content/cms/research/research-projects/assist/>) demonstrated that the intervention is effective. We have developed a **not-for profit foundation** to ensure maximal

uptake and further development of the intervention. Income from licensing this programme is ploughed back into the foundation to use for further development and marketing, thus ensuring sustainability.

6. **Charities:** We recognise the importance of the third sector in improving care. We have therefore supported Rollnick to contribute to the Board of the Paediatric AIDS Treatment for Africa (PATA: [www.teampata.org](http://www.teampata.org)). The mission of PATA is to expand access to care for children infected by HIV and their families throughout the African continent. Rollnick's role has been to help design interventions and training programmes for front-line AIDS workers and expert patients to communicate more effectively around disclosure and treatment adherence. Rollnick has been a consultant to PATA since its foundation in 2005. PATA now supports 50 treatment teams from 12 African counties.

### **c. Strategy and plans**

The Cochrane Institute of Primary Care and Public Health's goal is to improve health and reduce inequalities in health and well being by (i) better understanding the causes of variation in health and in health care delivery; (ii) developing and evaluating interventions that also address inequalities in health and well being, and (iii) ensuring our work is taken up into practice and policy. Our strategy is to develop a unique, distinctive long term leadership and multidisciplinary engagement role for Cardiff University, in partnership with NHS Wales and local communities, to improve the health services, health and wellbeing of some of the UK's most unhealthy populations. In doing so we will build on the world renowned Cochrane legacy to sustain world-leading research, implementation science, teaching and training. Key partners within Wales are the local communities themselves, Welsh Government, Public Health Wales, Health Boards, Local Government, the voluntary sector and other Higher Education Institutes. Beyond Wales we have developed strong partnerships with Bristol, Liverpool, Oxford, Southampton Universities through DECIPHer (Centre for the Development and Evaluation of Complex Interventions for Public Health Improvement), Centre for Improving Population Health through E-Health Research (CIPHER), UK Biobank, and internationally with Amsterdam, Antwerp, Maastricht, Tromsø, Utrecht through CHAMP (Changing behaviour of health care officials and the general public towards a more prudent use of anti-microbial agents), GRACE (Genomics to combat resistance against antibiotics in community-acquired lower respiratory tract infections in Europe) and IMPAC3T (Improving management of patients with acute cough by C-reactive protein point of care testing and communication training) studies. The Wales School of Primary Care Research (WSPCR) is hosted by the Institute (Butler is the Foundation Director, Francis and Gal are Senior Research Fellows). The WSPCR is part of the Europe Science Foundation funded Translational Research on Antimicrobial resistance and Community-acquired infections in Europe (TRACE), and Butler is on the Steering Committee. TRACE links us in with a network of common infections researchers in over 20 sites across Europe and Hong Kong, and has been the basis of major EU funding initiatives (e.g Euros 24.5M, >20 country PREPARE consortium: Cardiff has a key role in Workpackages 1 and 4).

### **d. Relationship to case studies**

1. The **Antibiotic Stewardship** case study demonstrates evidence of our success in linking international health policy priorities to local clinical practice, exploiting close links to patient care in large populations to understand causal relationships between antibiotic prescribing and resistance, testing innovations in practice to improve appropriate prescribing and translating findings into national and international policy, guidelines and practice, including the 2009 NICE guideline on managing acute respiratory tract infections.
2. The **Child Protection** case study shows how we tackled a complex, highly emotive and important health issue that is difficult to research, carrying out world leading research to define and measure intentional harm to children. This demonstrates close linking between our researchers and clinical staff, social care professionals, family support charities, victims and their carers, the police and Home Office experts and the legal profession. Research findings from rigorous systematic review outputs have been used to engage the public and health and social care professionals through targeted outputs. This work has informed five national guidelines, the national Child Protection training programme and the first NICE guidance on when to suspect child maltreatment (2009).
3. The **Motivational Interviewing** case study demonstrates evidence of innovation in intervention research that has had worldwide impact in shaping clinical services and improving professional-patient interaction and therefore the quality of clinical care. Techniques have been further refined to extend the influence of clinicians to change the health behaviour of their patients (e.g. diet, exercise, smoking and drinking), and are now widely used in healthcare worldwide.