

## Impact template (REF3a)

<b>Institution: University of Dundee</b>
<b>Unit of Assessment: UoA2 Public Health, Health Services and Primary Care</b>
<b>a. Context</b>

Multidisciplinary research in Public Health and Primary Care at the University of Dundee is designed, implemented and disseminated with a view to translation to policy and practice. It:

- i. benefits current and potential **patients**;
- ii. informs the practice of a range of health **professionals**; and
- iii. influences **policy-makers**, shaping health policy locally, nationally and internationally.

The findings of our research influence the national healthcare policy of EU, UK and Scottish Government Health Directorates and NHS Scotland. Our research also informs organisations such as NHS Health Boards, Scottish Local Authorities, the National Institute for Health and Care Excellence (NICE), the Scottish Intercollegiate Guidelines Network, the Scottish Medicines Consortium, the Scottish Antimicrobial Prescribing Group and Healthcare Improvement Scotland. In cancer screening and prevention our research helps to support the work of a number of cancer agencies through the Scottish Cancer Coalition and the Scottish Cancer Taskforce. Our main impact is better health and improved care in hospitals, primary care and the community. This is achieved through better, safer and more effective prescribing, developing and implementing effective interventions and prevention strategies targeted at people at high risk of disease, and influencing relevant policy-making bodies.

<b>b. Approach to impact</b>
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As well as publishing research in high impact peer-reviewed journals we aim to spread impact to patients, professionals and policy-makers via wider publication. Research papers are followed by summaries and educational articles in professional journals, public meetings and press releases. We encourage researchers to take time for these activities in order to maximise the impact of their research, ensuring that this is prioritised in annual Objective Setting and Review evaluations. We work actively with patient, professional and policy groups and support staff members to undertake work as policy advisors for third sector agencies including Bowel Cancer UK and Breakthrough Breast Cancer. These opportunities are specifically encouraged through Consultant Job Plans and by line managers through University-led Objective Setting and Review/Clinical Appraisals.

i. **Patients.** We work to maximise impact by ensuring strong public and patient involvement in developing our research. For example, the aims and methods of **Smith's** MRC-funded study on chronic pain self-management (<http://medicine.dundee.ac.uk/medical-research-institute/division-population-health-sciences/eopic>) was based on a series of Economic and Social Research Council-funded seminars for lay people; the Users' Group that arose from this series continues to advise on the research and comment on its outcomes. More broadly, the SHARE Scottish Health Register programme (**Sullivan**; [www.registerforshare.org](http://www.registerforshare.org)) is creating a national register of people willing to participate in medical research and to be contacted directly by researchers.

ii. **Professionals.** We involve NHS professionals in research design and conduct, disseminating our findings to them through seminars and newsletters. We lead the Scottish School of Primary Care ([www.sspc.ac.uk](http://www.sspc.ac.uk), **Sullivan**) which co-ordinates this activity across Scotland through an annual conference, web-based research briefings and slide-packs for use in educational activities; recent examples include one on the distribution and impact of multi-morbidity (**Guthrie**). The Unit's researchers contribute to continuing professional development activities, including national initiatives and those led locally by the Royal College of General Practitioners.

iii. **Policy-makers.** We solicit active input from NHS senior managers on the design of research including prescribing safety intervention trials (**Guthrie**), work to improve guidelines (**Guthrie**) and patient safety (**Davey, Guthrie**). Our researchers sit on policy steering groups at NHS Healthcare Improvement Scotland (**Guthrie, Smith**), NICE (**Anderson, Guthrie, Smith**), the Scottish Medicines Consortium (**Donnan**) and the Scottish Antimicrobial Prescribing Group (**Davey**).

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Ministerial appointments on committees including the Scientific Advisory Committee on Nutrition, Scottish Government Food Research Committee and the Scotland Food and Drink Reputation Working group (**Anderson**) have influenced national policy on food and health. The Prevention of Alcohol-Related Harm Group (**Crombie**) has established a Working Group with Scottish Government policy staff, NHS staff, voluntary organizations and local government and **Crombie** has a lead role in the Scottish School of Public Health Research, created to ensure alignment between the needs of policy makers and practitioners and the work of public health researchers.

We use the same approach to impact across all three of our main research themes. Successful examples of this approach include:

- **Cancer screening and prevention:** **Steele's** programme developing and implementing faecal occult blood test screening and improving uptake across the population has been the major influence on UK policy development. The Scottish Cancer Prevention Network (directed by **Anderson, Steele**) enables research findings to be disseminated via social media, websites and quarterly newsletters, and was recognized by the University's Ian Stephenson Award for Public Engagement. Scottish Cancer Prevention Network conferences have enabled direct engagement with the Chief Medical Officer, MSPs, voluntary agencies, patients and the public, leading to the adoption of cancer prevention as a major theme for the Scottish Government, through its Cancer Taskforce ([www.scotland.gov.uk/Publications/2008/10/24140351/6](http://www.scotland.gov.uk/Publications/2008/10/24140351/6)).
- **Antibiotic resistance:** Research and policy development by **Davey** has led to widespread improvements in hospital-based antibiotic prescribing and consequent reductions in antibiotic resistance and incidence of *Clostridium difficile* infection.
- **Nutrition:** **Anderson's** research and influence on diet and nutrition has led to policy changes including food retailing initiatives, nutrient standards for school meals, and intervention materials within screening programmes.
- **Pain:** **Smith** sits on and has chaired the NHS/Scottish Government Health Directorates Chronic Pain Steering Group which has developed a Service Model for Chronic Pain treatment, to be adopted by NHS Boards across Scotland. It has also developed education, research and audit strategies leading to improved management of chronic pain across Scotland.
- **Better Guidelines:** **Guthrie** leads a collaborative project designed with and actively involving NICE and the Scottish Intercollegiate Guidelines Network aiming to improve the way national clinical guidelines account for multi-morbidity.
- **eHealth Data Research:** Tools to predict emergency hospital admission, developed by **Donnan** for use in risk stratification and case management, are now used in NHS Tayside and NHS Grampian. From 2006-2012 we created and ran an informatics tool to support NHS Board quality assurance of practices. This built on work to design better ways of presenting quality data to clinicians and managers and is now being built into routine NHS Scotland systems. Research showing that the existing payment formula (which distributes >£1 billion of public money) was flawed led to a revision to the payment system in 2010 (**Guthrie**).
- **Prescribing quality and safety:** Indicators of unsafe prescribing published by **Guthrie** et al (BMJ 2011) were implemented in the BMJ Informatics Audit+ tool which is used by hundreds of practices across the UK. These have been incorporated into the safer medicines work of the Scottish Patient Safety Programme in primary care, and national guidance on management of people with polypharmacy. The DQIP and EFIPPS prescribing safety trials were designed in collaboration with the NHS, the informatics element of each intervention built inside existing NHS information technology systems to facilitate future NHS implementation (**Guthrie**).

### c. Strategy and plans

Our research themes were identified strategically on the basis of potential for impact in the health services, and focus on applied, implementation and translational research. Clinical relevance and impact are considered from the start of every project and Divisional support is prioritised accordingly. Our Impact Strategy is overseen by the Division of Population Health Sciences Executive Committee, which meets monthly.

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Key identified tasks in the Impact Strategy include:

- prioritising the achievement of impact;
- supporting staff in making relevant contacts through existing networks and targeted introductions, engaging in dialogue with research users at planning stages, and supporting non-academic dissemination and translation into practice;
- designing research in collaboration with the NHS with a view to future engagement and implementation across the NHS.
- reviewing successful examples and identifying reasons for impact;
- developing and nurturing Users' Advisory Groups for individual studies/programmes;
- maintaining a well-signposted and up-to-date website (<http://medicine.dundee.ac.uk/phs>);
- reviewing research impact bi-annually within Division; and
- identifying and participating in relevant impact training and resources, including Organizational and Professional Development unit courses on "Communicating Science" and "Engaging the Public with your Research".

Key tasks for individual researchers and groups include formally considering how to maximise the impact of each paper by means of non-academic publications, meetings, evaluation of impact and slide packs summarising key findings; involving users at protocol development and dissemination stages of all projects; and using training and impact resources available from the University, including the Press Office, and "Revealing Research", the University's public engagement office.

The Venture Programme is the University's enterprise initiative that supports, trains and mentors early career researchers and postgraduate students with a view to maximising the current and potential impact of their output. It offers workshops on the development, funding and communication of research and/or business ideas, one-to-one mentoring and an optional competition. The University supports public engagement through its Revealing Research office (<http://www.dundee.ac.uk/revealingresearch/>). The Unit has contributed to public events such as Café Science, Discovery Days and TEDMEDLive Dundee 2013. **Smith** has hosted three annual Scottish meetings showcasing research on causes and treatment of pain, attended by service users, practising clinicians, policymakers, potential industrial partners and international speakers.

The University Press Office helps to publicise our work where this may assist impact. Recent examples include press releases on key projects such as SHARE (<http://medicine.dundee.ac.uk/news/national-health-register-project-led-professor-frank-sullivan>), drug prescribing in care homes (<http://www.scotsman.com/news/health/no-excuse-for-using-drugs-to-keep-the-elderly-manageable-in-care-homes-1-2523658>) and "Football Fans in Training" (<http://medicine.dundee.ac.uk/news/dundee-supports-healthier-supporters>).

<b>d. Relationship to case studies</b>
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- **Changing clinical practice in Bell's Palsy: the impact of a clinical trial highlighting the impact of evidence for primary care (Sullivan).** The results of the Bell's Palsy study informed national treatment guidelines in Scotland, Spain, Ireland and India and were summarised in professional educational articles. Our recent research explored the impact of this study and demonstrated appropriate changes in UK prescribing practices for Bell's Palsy attributable to publication of the study in the *New England Journal of Medicine*.
- **Faecal Occult Blood (FOB) screening and the prevention of deaths from colorectal cancer (Steele).** The research of Steele and his team has optimised public engagement with colorectal cancer screening, demonstrating increasing uptake and preventing over 2,000 deaths per year (a 27% reduction among those participating). This collaboration with Scottish and UK Governments has been central to colorectal cancer screening practice across the UK.
- **Improving antibiotic prescribing to hospital inpatients (Davey).** This research programme, accompanied by high level dialogue with NHS Tayside, Scottish, UK and European policy makers and colleagues, is demonstrating local and national improvements in antibiotic prescribing and consequent reductions in *C. difficile* infection rates as well as assessing unintended consequences of antibiotic stewardship interventions.