Institution: Newcastle University

Unit of Assessment: UoA 2

a. Context:

UoA 2 academics deliver *high quality translational research* on health improvement and the uptake of evidence into policy and practice, which directly benefits patients and the wider public. Our strong focus on prevention means that impact is achieved through the avoidance of ill-health and associated costs as well as conditions treated. Our beneficiaries are:

(a) Patients and the Public: via specific tools and resources which shape their care. An example (**Thomson**) is COMPASS (COMPuterised decision Aid for Stroke thrombolysiS), a bedside system to directly support shared decision-making by providing immediate information for patients on likely outcomes with and without thrombolysis. The accessibility and ease of use of this 'app' ensures that patients receive treatment as soon as possible. COMPASS won first place in the 'Innovative Service Delivery' category of the Bright Ideas in Health Awards 2013 (NHS Innovations North.).

(b) *Practitioners*: via clinically relevant outcome-focused work and implementation science to promote service change. An example is case management for people with dementia to improve quality of life led by **Robinson** (RCGP Clinical Champion for Dementia and primary care lead on the National Dementia Strategy Implementation Group) via her continuing professional development (CPD) work with GPs: keynote lectures (*Ageing; challenges for 21st century care*); two national educational events for over 300 GPs; and a series of public and professional events such as *Dementia Matters* with VoiceNorth (**Bond** established this group; **Moffatt** is a Board member).

(c) Policy Makers: via high quality evidence in national guidance, research on guideline adoption and expert contribution to NICE guideline groups to shape (inter)national policy and practice (**Bell**, **Eccles, Kaner, Stansby, Thomson**). An example is **Kaner**'s chairing of the NICE Public Health guidance on the prevention of alcohol harm (PH24 2010), which produced the first NICE guidance with specific recommendations for policy-makers (on the price, promotion and availability of alcohol) and sparked extensive public debate (e.g. BBC radio 4 TODAY, 15th Feb 2012) and legislative commitment by governments in Scotland and Northern Ireland to introduce a minimum unit price.

b. Approach to impact:

Our approach to impact has been to use public engagement, evidence synthesis, proactive dissemination and knowledge brokerage to co-create clinically relevant research, influence policy and practice debates and promote evidence uptake to improve care. Since 2008, we have pooled all uncommitted resources to increase the significance and reach of our research and to support impact generation. We are also committed to working with patients, public, practitioners and policy-makers at an early stage to shape study designs to ensure our work meets their needs. Different approaches to impact are exemplified by key platforms that support impact in our unit: the ***Newcastle Clinical Trials Unit*** (NCTU, led by **McColl**, UKCRC-registered) conducts a large number of trials (51 active studies), each of which directly addresses a critical research need of a policy-maker, practitioner or commercial partner. NCTU works with these partners to design and conduct trials and also supports analysis and dissemination to ensure impact on policy and practice. For example, the randomised preference trial of medical versus surgical termination of pregnancy was used by the Royal College of Obstetricians and Gynaecologists in their 2011 guidance on recommended care for women requesting induced abortion (Guideline 7). Our **UKCRC Public Health Research Centre of Excellence** (**Fuse**) focuses on Translational Research (**White, Kaner, Sniehotta, Vale**). A core function is to promote knowledge exchange with policy and practice partners across the UK. In 2012 alone, Fuse ran six 'Research to Reality' events to support evidence uptake in key National Indicator (NI) areas: tobacco control (NI 123), alcohol harm (NI 39), childhood obesity (NI 56), under-age pregnancy (NI 112), work and incapacity (NI 152, 153, 173), and youth education and employment (NI 117). The 234 attendees included service commissioners, charities, local authorities and their impact is exemplified by the following quote from an NHS manager: *'what I went along expecting and, I think it achieved, was trying to develop the interface between the academic world or the research world and the clinical or the frontline world of (service) and develop relationships and encourage more joint working'.* Fuse

is also a founding member of the NIHR School for Public Health Research whose remit is to generate evidence to inform policy and practice at a local level and the Department of Health Public Health Research Consortium which has a national remit.
Further exemplars of our approach to impact are:

Resources and approaches that directly shape patient care

MAGIC (Making Good decisions In Collaboration) (**Thomson),** produced a shared decision-making (SDM) resource and a suite of brief decision aids (BDAs) (available on http://www.patient.co.uk/decision-aids) to improve decision-making. Research has shown that 87% of clinicians and 78% of patients agreed that they support treatment discussions between them. Further BDAs are due to be available nationally via the EMIS GP information system, impacting upon approximately 65% of all GPs. An example of a partnership model in developing research and impact is that of **Rapley**, with colleagues in UoA1 and in collaboration with *Arthritis Research UK,* who developed cutting edge educational media (video and pdf booklet) supporting the training of clinicians to improve clinical care in juvenile arthritis. Over 15,600 copies have been distributed since 2012. **Colver**'s research on disability in children, described as '*transformationally important*' by the *Lancet,* has demonstrated that by manipulating environments and involving children in decisions about their care, profound improvements to their lives can be achieved.

Research that improves professional practice

Robinson's research on the non-drug management of behavioural problems in dementia and national primary care leadership on the National Advisory Group for anti-psychotic drug use has led to an evidence-based, multi-disciplinary care pathway, disseminated nationally in 2011, along with an e-Learning resource to assist GPs to translate this into practice (commissioned by BMJ Learning/Alzheimer's Society). The resource was launched in 2013 and approximately 1700 generalist clinicians completed it in the first three months. **Kaner**'s work on the development of brief alcohol intervention protocols for primary care practicioners was made freely available on the web in 2009 and had 18,024 downloads in the first six months. **Vale** and **Deverill**'s work, collaborating with practitioners around the world, has directly informed national and international guidelines on treatments for benign prostatic enlargement. It has spurred further industry work (American Medical Systems, http://clinicaltrials.gov/show/NCT01218672) on new interventions for testing. Newcastle's economic model for business case development is now used by a number of regulatory authorities e.g. NICE, Institute for Quality and Efficiency in Healthcare and the Canadian Agency for Drugs and Technologies in Health.

Expertise embedded in national policies

Stansby's research on vascular disease has informed NICE guidelines including the management of: varicose veins in the legs (CG168); and CG147; CG144; and CG92. **Thomson** was a member of the NICE Guideline Development Group for Patient Experience in Adult NHS Services and **LeCouteur** of the group on Autism Spectrum Disorders. **Kaner** is currently a member of a Health Evidence Expert group instigated by the three UK Chief Medical Officers to develop new recommendations on sensible drinking. **Adams**' and **White**'s work showing the limited impact of legislation to restrict children's exposure to television advertising of unhealthy food is informing **OfCom** policy and has led to calls by the Scottish Public Health minister for a change in government policy. **Adams**' work on alcohol marketing also led to calls for a restriction of alcohol marketing during televised football matches.

c. Strategy and plans:

Whilst we have always sought to achieve impact from our research, we plan to maximise future impact via further development of tools, technology and staff capabilities to build upon our current world class research infrastructure. Our forward strategy will be led by our Engagement and Impact group (led by **Newbury-Birch** and **Thomson**) which reports directly to the IHS executive board under a standing agenda item. This group promotes the wider exposure of our work and organises developmental opportunities for researchers, as well as supporting the sharing of good practice. To ensure future impact, we will focus on the following approaches:

Developing impact throughout the research process. Using our research infrastructure we will

proactively design an impact strategy for each research project, including mechanisms to monitor and measure impact during and beyond the end of the project. This will include working with the Faculty's Funding Development Managers and the Enterprise team's Business Development Managers to identify impact opportunities and opportunities for collaborative working such as Knowledge Transfer Partnerships.

Building capacity: The recruitment and development of researchers with the ability to generate impact is essential. Early career academics will be linked with a mentor (independent of line management) to support personal development by the active encouragement of wider skills. Regular 'bitesize' meetings with external input will facilitate learning and knowledge transfer on key areas (e.g. social media for dissemination and animation to simplify research for lay audiences).

Developing conceptual impact by promoting a better understanding of health issues and framing societal debate. We will continue to provide field leadership in implementation science which promotes evidence uptake and care improvement. **Eccles** was founding chief editor of the first open access journal in this field, winning BioMed Central editor of the year in 2012. **Thomson** and **Vale**'s work is flagged in a Health Foundation review of leading improvement science units.

Developing Instrumental impact by directly influencing policy development, practice or service provision via active work with local, national and international policy-makers. Staff will be encouraged to work with policy-makers via membership and leadership of groups such as Local Health & Well-Being Boards, NICE, national expert groups and WHO.

Shaping the impact agenda: We will develop our contributions to professional associations in order to shape future change in policy and practice and extend our involvement in groups like the Cochrane and Campbell Collaborations, the British Sociological Society and the Royal Colleges.

d. Relationship to case studies:

Our four case studies exemplify the pathways we have adopted to ensure impact on: patients and the public; health care practice and health policy. **Robinson**'s research on dementia shows major impact on patients and public whilst shaping high-level policy. She built upon her leadership in this area and the excellent links with policy, practice and patient organisations and groups to maximise impact. This included identification and emphasis of key messages to partners such as drawing out the implications of long delays before a diagnosis of dementia was given. The links to practitioners and patients groups has enabled disclosure of more timely diagnosis with a better understanding of their needs and wishes and the NHS benefits through reductions in long term care costs. High level links have enabled the research to inform policy documents such as the Prime Minister's 2012 Challenge on Dementia and national guidance in the form of Department of Health commissioning packs for dementia carers. **Kaner**'s research on the development, evaluation and implementation of screening and brief alcohol interventions (SBI) has built on an explicit drive to influence policy and practice from the outset. Kaner has built links with the research, practice and policy communities to ensure not only the academic excellence of the work but also its ready accessibility to practitioners and national policy-makers (e.g. HM Government's Alcohol Strategy and a National Audit Office report). Capacity building via PhDs has enabled the identification of impact via work on alcohol commissioning structures and the interrogation of general practice IT systems to demonstrate increased SBI delivery in routine primary care leading to estimated net savings of £100M annually to the NHS. **Eccles** is a world leader in guideline development and implementation research. His extensive links to policy and practice has led directly to the development of guidelines across a range of conditions (including myocardial infarction, asthma and angina). Eccles and the Newcastle group have repeatedly demonstrated how to implement evidence based guidelines leading to efficient health gains thus impacting on patients, NHS and society. Research led by **Ford** on rapid referral of stroke patients to a specialist centre, focused on a critical but hitherto underexplored area of great interest to practicing clinicians and patients. Working closely with researchers, whilst being embedded within stroke service, and developing strong links to related services (like ambulance services) led to the practical redesign of services for direct transport of victims to specialised units, and an easy to use validated test for paramedics to recognise signs of stroke, which was further developed as the nationwide Face-Arms-Speech-Time (Act-FAST) campaign to promote emergency access for patients experiencing stroke symptoms.