Institution: University of Aberdeen

Unit of Assessment: 2 - Public Health, Health Services and Primary Care

a. Context

Research undertaken by staff in public health, health services and primary care at the University of Aberdeen informs decision-making in healthcare. As indicated in our research environment statement (REF5) we focus particularly on *investigating the determinants and diagnosis of common symptoms and conditions*; *evaluating health and healthcare interventions*; and *delivery and organisation of healthcare*. Our research is thus directly relevant to a range of stakeholders who make decisions about the provision of healthcare - the public, patients, health care practitioners, healthcare professional bodies, healthcare managers, policy makers, non-government organisations and governments.

Research (including our long-standing programme of research on methods for optimal implementation of evidence and behaviour change) has shown consistently that passive dissemination of research findings is insufficient to ensure that results of research are adopted into practice or have impact outwith academia. We are thus continually adapting mechanisms to promote the impact and uptake of our research, such that the traction of our research can be maximised.

b. Approach to impact

To maximise the potential for impact, we seek routinely to undertake research that is ***excellent***, ***relevant*** and ***accessible***. We match the design and delivery of cutting-edge research with robust knowledge translation strategies. Our approach to maximising the relevance and impact of our research is focussed on identifying the questions that matter most to stakeholders, then developing and applying the best methods to answer these questions and tailoring the dissemination and implementation of results to the needs of specific stakeholder groups.

The implementation of this approach is multi-faceted and includes:

1. Maximising the relevance of our research to our stakeholders: It is important, at the outset, that all research undertaken by our group is relevant to our stakeholders and addresses relevant scientific and societal questions. To ensure this, we routinely involve the public and patients in the design, execution and interpretation of our research. For example, the Pain Research Group (***Macfarlane G, Elliott-A***) has established the Aberdeen Pain Research Collaboration User Group to work with them to inform research priorities. Membership is now being extended to people with different conditions. The Academic Urology Group (***N'Dow, Maclennan-S, Skea***) also has a patient forum to advise them on research. This approach is augmented by the adoption of research priorities already identified by other patient groups. For example, the research portfolio on pelvic floor dysfunction (***Glazener, N'Dow***) is directly engaged with the James Lind Alliance (an organisation which brings together patients, carers and clinicians to identify and prioritise the top research priorities in specific areas). We also ensure active engagement between our researchers and NHS managers and policy makers. This is primarily coordinated through the two Chief Scientist Office for Scotland-funded units – the Health Services Research Unit (led by ***Campbell***) and the Health Economics Research Unit (led by ***Ryan***). Both units engage directly with policy makers in the Scottish Government on a regular basis. For example, both have Advisory Groups which include key decision-makers such as the Chief Executives of NHS Boards, the Chief Executive of Health Improvement Scotland, and the Deputy Chief Medical Officer. These Advisory Groups meet regularly to discuss key research priorities within the NHS and government.

2. Ensuring close liaison with health care providers and policy makers such that our research addresses known evidence gaps: Close interaction between policy makers and our researchers facilitates the development and delivery of applied research that provides definitive answers to important issues. This also supports the subsequent dissemination of results into clinical practice or policy. The research outlined in the "*Smoking Ban in Scotland*" case study is an exemplar of this - it was undertaken in response to a direct policy need, ensuring the results were rapidly

adopted into legislation, with subsequent improvements in public health. A significant proportion of our research is undertaken in direct response to evidence gaps highlighted by government agencies. For example, since 2008, we have undertaken 24 reviews directly requested by the National Institute for Health and Clinical Excellence (NICE) though our contract as one of the select number of UK centres authorised to undertake their Technology Assessment Reviews (***Mowatt***). NICE uses these reviews to directly inform the guidance it issues to the NHS. Similarly, until 2011, we (***Ramsay, Mowatt),*** together with colleagues in Sheffield, provided *all* the evidence syntheses for the UK Interventional Procedures Committee - the Committee that decides which new interventional procedures are allowed to be used within the NHS. We undertake a large portfolio of research projects funded by the HTA Commissioning Board, which commissions projects that have been prioritised as having high NHS need (we have been applicants on 17 newly awarded research grants from the HTA Commissioning Board since 2008, worth approximately £17.5m). Our close relationship with agencies funding this type of research ensures that our findings rapidly influence clinical or policy practice. For example, researchers in HERU (***McNamee, Scotland***) provide direct input to the Scottish Medicines Consortium and the Scottish Health Technologies Group on economic evaluations. Researchers from the respiratory group work with the Scottish Government Working Group on the development of new Tobacco Control policies. We engage in a number of formal knowledge transfer partnerships. This has involved embedding researchers in health board settings, thus leading to increased understanding of the underlying clinical need, and quicker uptake of results. For example, one of our embedded-researcher projects led directly to the re-shaping of endoscopy services in the NHS Grampian region, and was a finalist in the 2012 Knowledge Transfer Partnership Scotland Awards. We promote health professional internships. For example, HSRU hosted a secondment from NHS Health Improvement Scotland from 2008-2010 resulting in increased collaboration between policy makers and researchers ensuring that the design and conduct of our research was in line with the needs of decision-makers. We include policy makers/managers as co-applicants on our research whenever possible, ensuring our research is grounded in the needs and reality of the health service. For example, ***Black*** and ***Bond*** hold a number grants with co-applicants from the Information and Statistics Division of the Scottish Government.

3. Promoting integrated working with professional associations ensuring that our research can respond quickly to emergent priorities: We actively engage with a number of professional associations, particularly those where the evidence base for clinical practice is not strong. For example, ***MacLennan-G*** sits on the board of the British Association of Urological Surgeons, ***Cook*** is a member of the international IDEAL network set up to promote research in surgery and ***Semple*** sits on the British Occupational Hygiene Technical Co-ordinating Committee - a professional association that liaises with the UK Health and Safety Executive in setting workplace health-based exposure limits. These interactions enable us to ascertain key clinical issues for specific disciplines and collate and analyse evidence to address these key issues. For example, our research on developing and evaluating the "Good Goals" intervention for the management of long-term conditions in children was raised by the clinical community as a topic requiring further research. This research was also awarded the runner-up prize in the 2012 UK Advancing Healthcare Awards. Working directly with professional associations also allows us to identify important gaps in current knowledge, work with the discipline to undertake the research needed to fill the gap, and ensure the resulting information changes clinical practice.

4. Engaging directly with clinical and policy-making organisations to promote the uptake of our research findings: Our research directly informs national and international clinical guidelines. For example, the Technology Assessment Review work (***Mowatt, McNamee, Scotland***) is incorporated directly into NICE guidelines. Our research informs Scottish Intercollegiate Guidelines Network (SIGN) guidelines. For example, research by ***Macfarlane-G*** informed the 2013 Chronic Pain SIGN guideline. Our research also informs key NHS policy documents. For example, ***Elliott-A's*** research was included in the pain section of the *150 years of the Annual Report of the Chief Medical Officer: On the State of Public Health. 2008*, CMO England. We ensure active engagement between our researchers and NHS managers and policy makers. For example, HERU provides bespoke briefing papers to government officials for individual projects with particular policy relevance. These ensure that findings are fed directly to decision-makers for early adoption of findings. ***Ramsay's*** work on the cost-effectiveness of robotic surgery for prostate

cancer was fast-tracked into Scottish government discussions on the role of the technology for the NHS. We also run conferences to disseminate results that affect policy. For example, the change in the dental contract described in the *Fissure Sealant* case study was prompted by the organisation of a specific dissemination conference to which the Chief Dental Officer for Scotland and other key policy personnel were invited to discuss the implications of the trial results.

5. Engaging directly with the public to promote understanding of our research: Our researchers regularly inform discussions and debates about the implications of findings to an audience beyond academia. For example our researchers (***Campbell, Norrie, Hannaford***) were partners in the 2008 "Get Randomised" campaign – a national TV, radio and print public service advertising campaign to promote awareness and understanding of randomised controlled trials. The evaluation of the campaign demonstrated a significant rise in public knowledge and understanding of the purpose of randomised controlled trials in healthcare. Research findings are disseminated to the public through the University of Aberdeen's Communications Team and also through its be-spoke Public Engagement in Research Unit. The University of Aberdeen is a Centre of Excellence for Public Engagement supported by the Research Councils UK Catalyst scheme, one of only eight such institutions across the UK. Through this initiative, the Public Engagement in Research Unit works closely with local, national and international partners to support year round initiatives that forge dynamic interactions between the University community and the public. For example, the Public Engagement with Research Unit coordinates a series of public engagement activities to highlight innovative findings and provides a forum to discuss scientific controversies through the University's *Café Scientifique, Café MED, Café Controversial,* and *Café Connect* talks (the UK's biggest Cafe discussion series). Our research, which has been highlighted in this way includes work on IVF and infertility, maternal mortality, minimum pricing for alcohol, public understanding of risk, public understanding of the safety of over-the-counter medicines, dietary choices for reducing climate change, healthy eating behaviours, eating disorders, the meaning of stress, and virtual healthcare. We also promote our research through our dedicated College of Life Sciences and Medicine Public Engagement Champion, Dr Margaret Watson, and through social networking media including Facebook and Twitter. Watson has recently established a Public Health Interest Group - a panel of lay people set up to help inform research priorities in the College and to aid the design, execution and interpretation of our research. At an individual project level, we ensure that all our outputs are publicly available, and thus easily accessible, through the University's AURA (Aberdeen University Research Archive) system. We disseminate our research findings through a wide range of media. For example ***Glazener*** took part in a podcast - available through *the Lancet* website - to describe the implications of the MAPS (Men After Prostate Surgery) trial and ***Ramsay*** took part in a live debate about the role of robotic surgery at a national meeting of health professionals in Ireland. Thus, our researchers regularly engage with the media, either to disseminate their own findings, or put the work of others into context.

c. Strategy and plans

Our strategy to maximise the impact of our work is built around the three tenets of ***excellence, relevance*** *and* ***accessibility*** of our research. The multi-faceted approaches outlined in section b. form our core strategy for promoting impact. However, we continually refresh our approaches, acknowledging the fast-changing pace of dissemination and implementation channels. We have also formulated an Institute of Applied Health Sciences wide strategy towards greater promotion of impact – available through our website - which was developed in consultation with communications experts. Looking forward, we will constantly review emerging innovative mechanisms to ensure that we are adopting the most up-to-date and robust knowledge translation techniques. One such mechanism that we have recently adopted is the formal transfer of evidence about knowledge translation activities from the disciplines of management and marketing. In order to do this we have strengthened the formal links with the University's Business School [both through our joint appointments of ***McKee*** (UoA 19) and ***Elliott-R*** and through the engagement of key business school academic partners on specific projects]. This has led to our increasing adoption of so-called "pull" mechanisms, ensuring that the methods we use to improve take-up of research knowledge are "participatory", with research users and producers working collaboratively. These shared approaches have included creating dedicated knowledge translation fellowships; placement of researchers in health care settings; and integration of health care workers into academia.

Over the coming REF period, we will build on this evidence-informed and multi-disciplinary approach to maximising impact, with a view to achieving step-change progress towards reducing the 'knowledge–to-action gap' between research evidence and healthcare practice and decision-making. We have undertaken a strategic recruitment campaign, which has resulted in the recruitment of two leading academics well known for their work in maximising the impact of research (***Entwistle*** and ***Treweek***). ***Entwistle*** has a world-leading reputation in the concepts of patient-centred approaches to health, insights from which will directly inform how we design our future research, and also how to maximise its relevance to stakeholders. Similarly ***Treweek*** has specialist expertise in the development of web-enabled toolkits (which package research findings into user-friendly formats), again bringing a new dimension to the future reach and accessibility of our research findings.

In addition to these bespoke developments, we embed the prioritisation of impact of our work beyond academia in our day-to-day research activities. We train all our researchers about the importance of impact and give them the tools and skills to maximise their impact activities. For example, the University runs a regular seminar series on how to maximise impact from research, which actively promotes the importance of making research accessible to multiple users. In all our activities we are supported at an institutional level with an active and engaged Communications Team which helps with the production and dissemination of media releases about research findings and with training of staff to work with the media. Our central Public Engagement with Research Unit trains staff and students in other public engagement activities. The importance of impact is also championed through the University's Committee for Research, Impact and Knowledge Exchange (CRIKE). CRIKE is the highest level research committee in the University with representation from researchers across all Colleges as well as a member of the University Court. Its aim is to develop and facilitate a research culture throughout the University as part of the Institution's aim of significantly improving its research profile. The committee oversees research grant income, commercialisation, postgraduate research students, researcher development and is responsible for the institutional impact strategy. Financial support is also directly available to researchers to promote public engagement activities through the University's Enabling Fund for Public Engagement with Research and further promoted through the annual Principal's Prize for Public Engagement with Research.

d. Relationship to case studies

The six submitted case studies are exemplars of our multi-faceted approach to promoting impact. The *Local Pay Analysis* and the *Smoking Ban in Scotland* case studies show how close liaison with policy makers leads to research that addresses known evidence gaps and therefore results were rapidly adopted into practice – in the former, a change in national policy and in the latter a change in legislation. The *Fissure Sealant* case study is an example of our strategy of engaging directly with clinical and policy-making organisations to promote the uptake of our research findings. The change in the dental contract was instituted directly following the organisation of a tailored dissemination conference to which the Chief Dental Officer for Scotland and other key policy personnel were invited to discuss the implications of the trial results. The *Breastfeeding* case study also highlights our strategy of ensuring close liaison with health care providers and policy makers such that our research addresses known evidence gaps. The evidence underpinning breastfeeding strategies was known to be poor and the series of research studies outlined in the case study provided robust evidence, to enable guidance to be changed on the strength of the findings. It also highlights our strategy to ensure relevance to public groups as the research has also underpinned guidance in the charitable sector. The *Aberdeen Varicose Vein Questionnaire* case study provides an example of both addressing known evidence gaps (at the time of its development, there was an unmet need for a measure to allow patients to rate their varicose veins) and integrating working with professional associations. As a result the measure was adopted into routine practice and is now the mandated patient reported measure for all varicose vein treatment in England and Wales. The *IVF* case study is an example of firstly working with policy makers to address known evidence gaps and secondly working with professional bodies (for example, the UK Human Fertilisation Embryology Authority) to promote rapid uptake of the findings.