Institution: University of York

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

a. Context

The University of York is a world leader in applied and methodological health research. We tackle challenging and important questions to help policy makers, professionals and service-users improve health, its distribution and the quality and efficiency of services. Our research focuses on Health Technology Assessment, Health Policy, and Public Health & Epidemiology.

The non-academic users and beneficiaries of our research include:

- *Policy makers*: UK and international government departments making health care and public health policy and international bodies which influence health policies (WHO, UNICEF, World Bank, OECD and a large number of non-governmental organisations (NGOs));
- *UK Regulatory bodies*: NICE, Office of National Statistics, Audit Commission, Care Quality Commission, Monitor, National Audit Office;
- *Service providers, health care commissioners, professional bodies and practitioners*: Hospitals, community services, primary care providers and local authorities, CCGs, CSUs, NHS Confederation and equivalent organisations internationally;
- *Patients and families, their support organisations, charities and the wider public*: British Heart Foundation (BHF), Cancer Research UK (CRUK), General Nursing Council Trust and various specialist third sector organisations e.g. Sickle Cell Society, Martin House and Diabetes UK;
- *Industry***:** Association of the British Pharmaceutical Industry, Association of British Healthcare Industries, various individual companies and intermediaries like Medipex and Medilink.

The main types of impact relevant to our research include:

- Health service/public health policy formation stimulated by ideas/evidence we generate;
- Policy change or refinement resulting from our evaluation or critique of existing policy;
- Better informed decisions on health service organisation and delivery and individual decisions by clinicians or service-users resulting from evidence based on our research. Also, providing these groups with access to and support in using research evidence held on our databases;
- Changes to policies or decisions due to adoption by policy makers or regulators of improved methods of measurement, analysis or decision-making which we developed;
- More cost-effective product development and service delivery though our training and consultancy support to the NHS and industry to help transfer knowledge.

b. Approach to impact

We have built on our strong track record of conducting high quality applied research that is methodologically robust whilst being timely and relevant to 'real life' decisions and have actively promoted its dissemination and implementation through engagement with end users. Key elements of our approach applied in the 2008-13 period include:

Conducting research of relevance and importance to users

Research priorities: Our commitment to enhancing the evidence base for policy and decision-making informs our research priorities and we adhere to the NIHR Adding Value Framework (http://www.nets.nihr.ac.uk/about/adding-value-in-research). We focus on addressing questions that policy makers, service users and clinicians need answered and providing evidence sufficient to inform practice and policy. We target research sponsored by organisations such as the Department of Health (DH), National Institute for Health Research (NIHR) and National Institute for Health and Care Excellence (NICE) to increase the potential for our outputs to have influence and impact. This forms the majority (74%) of our £58m research portfolio over the period, so maximising impact.

Our impact is further supported by a proactive, "research cycle" approach: identify clinical or policy uncertainty; conduct systematic reviews to take stock of knowledge; carry out primary research to fill identified gaps; feed new knowledge back to the research users. Staff are trained and encouraged to undertake reviews as well as primary research. This approach has been successful, influencing coverage decisions/guidelines e.g. in wound care, back pain, and screening for depression and policies such as infant feeding and the organisation of mental health services.

Long-term relationships with research users and beneficiaries: We seek to ensure relevance of our research by establishing relationships with research users, nurturing links with policy and practice communities and supporting visitors to our academic units from national and overseas health services. The well-established centres, units and programmes in York, core-funded by the DH, NIHR and charities, promote long term partnership and engagement with policy and practice communities which are more likely to act on the evidence generated. The University has provided a stable environment and support for such long-term relationships:

- *The Centre for Health Economics* (CHE) has received DH programme funding for nearly 30 years. It was awarded the Queen's Anniversary Prize for Higher Education in 2008, a criterion for which is "impact and benefit for the wider community". It developed resource allocation formulae for the DH for 20 years, productivity measurement methods and methods for NICE (see case studies). CHE won funding for two large new DH funded, policy-led units in 2012:
  - *The Economics of Social and Health Care Research Unit with the LSE and Kent;*
  - *Policy Research Unit in Economic Evaluation of Health and Care Intervention with ScHARR;*
- *The Centre for Reviews and Dissemination* (CRD), core-funded by the NHS/NIHR for 20 years, provides research intelligence which is requested and then used in policy making and clinical practice. It actively disseminates its research, supported by a dedicated dissemination team, using a range of routes and media;
- *The British Heart Foundation Care and Education Research Group* established in 2003, conducts research on cardiac rehabilitation which the BHF uses to improve services;
- The *Epidemiology and Cancer Statistics Group* established in 2001, is core funded by Leukaemia Lymphoma Research to understand the causes of all blood cancers;
- The *Public Health Research Consortium* of seven universities, National Children's Bureau and NatCen, founded in 2005, developed all its projects in consultation with DH policy teams.

Involving a wide range of stakeholders: We support the translation of knowledge into policy and practice through an iterative, interactive process undertaken between all stakeholders. Service-users, policy makers and practitioners are involved in the prioritisation, design, conduct and dissemination of research to ensure our work is relevant and achieves impact. Our researchers receive training on how to effectively engage and support involvement of service users. CRD, for example, has three patient-public representatives on its Advisory Board. Our wound care team worked with the James Lind Alliance involving over 1000 patients/clinicians to identify important areas of uncertainty on the prevention and management of wounds which need further research.

Conducting research specifically for incorporation in national guidance and guidelines
York is one of several centres commissioned by NIHR to conduct Technology Assessment Reviews, '*to meet the urgent needs of national NHS decision-making bodies and policy customers*'. Systematic reviews have been commissioned specifically to inform policy (e.g. whether to change legislation on organ donation, 2009). We conducted the first technology assessment review in the diagnostic field in 2011, where we showed that EOS 2D/3D X-ray imaging was no better than conventional X-ray devices for scoliosis and other relevant conditions. This led to NICE issuing its first diagnostic guidance recommending EOS 2D/3D not be used routinely.

Participating in funded initiatives specifically designed to help mobilise knowledge
Implementation of research findings is not automatic. We have been proactive in mobilising knowledge by engaging with decision makers in the region, for example:

- *Collaboration for Leadership in Applied Health Research and Care (CLAHRC) (2008-13).* We collaborated (with Leeds and Bradford NHS) in the NIHR-funded CLAHRC, generating and translating research into practice. York's led on three themes with strong links to the local NHS. Our Translating Research into Practice programme (TRiP-Lab) promotes research use and responds to NHS requests for evidence briefings. Research on eating disorders requested by a mental health trust, for example, led to service reconfiguration;
- *Yorkshire & Humber Health Innovation and Education Cluster (HIEC) (2009-13).* This partnership between the NHS, academia and industry aimed to improve patient care through '*the systematic and managed adoption and diffusion of proven innovative practices, care and technologies'*. York focused on improving care in neonatal units and in labour

through training and development to accelerate research adoption (detailed in *breastfeeding* case study);
- *Academic Health Science Network (AHSN) (2012 -18).* York plays a leading role in the development of the Yorkshire & Humber AHSN which promotes the rapid transfer of knowledge to improve health, health services and create wealth;
- *York Health Economics Consortium (YHEC)* a University wholly-owned subsidiary, is a knowledge exchange arm for York health economics and health services research, providing consultancy and research for the NHS and industry (average annual turnover ~ £2m). YHEC hosts two "Knowledge Transfer Partnerships" (i) economic evaluation methods with Medipex, an NHS healthcare innovation hub; (ii) patient reported outcomes with AstraZeneca. It is an External Assessment Centre for NICE Medical Technologies Evaluation Programme and collaborates in the NIHR-funded Health Technology Co-operative in wound care (2013).

Collecting and analysing data to provide intelligence for improving policy and services
We coordinate the collection and/or analysis and interpretation of regional and national data on behalf of policy makers and clinical communities, the results of which inform decision making. This is supported by University provision of secure high performance IT infrastructure:
- *Patient Case - Management Information System (PC-MIS ©)* for the 'Improving Access to Psychological Therapies' (IAPT) services throughout England (detailed in *PC-MIS* case study);
- Development of a tool used by the DH to examine different scenarios on NHS productivity estimates and analysis of national data on consultant productivity for the DH (see case study);
- The *National Audit of Cardiac Rehabilitation* collects comprehensive audit data for the NHS Information Centre to improve the quality and equity of services for patients after heart attack.

Participation in organisations/events to influence policy and practice
We enhance impact through participation in policy advisory boards and working groups (e.g. UN, OECD and World Bank panels, NICE committees, NHS Evidence advisory groups, policy reviews, advisory committees and technical groups) and have advised House of Commons Health Committee enquiries. Since 2008, for example, ten York researchers have been members of Technology Appraisals Committees and three of the NICE Public Health Interventions Advisory Committee. Others have participated in the NICE Accreditation Advisory Committee and in methods development panels and workshops. Researchers also spend time with policy makers, e.g. Cookson's 2010 secondment to the Prime Ministers' Delivery Unit as principal health analyst and Torgerson's Cabinet Office work on trials to evaluate public policy.

Supporting active, planned and effective dissemination of research
A dissemination plan is produced for relevant projects to ensure that target audiences are made aware of key findings and we invest resources to make outputs widely accessible. We promote international reach by sharing results with policy and other decision makers worldwide and hosting international visitors. Our researchers undergo media/dissemination training, with support from York's Communications office. Dissemination is tailored to the key messages, taking account of the target audiences and using various media including Twitter. We engage with key audiences to check we are meeting their needs, for example, our 2012 workshop with NHS managers and commissioners on improving the impact of NIHR-funded systematic reviews and economic evaluations. Researchers are supported by a team of three people with expertise in knowledge translation, and two NHS consultants, who are Senior Fellows in Knowledge Translation.

Promoting understanding and use of our and other's research
We offer training for policy makers, practitioners, public and private sector analysts to promote research uptake. These include short courses on 'knowledge transfer and Implementation', 'understanding health economic models', 'measuring efficiency' and 'using Hospital Episode System data'. We also provide a service whereby we identify, provide access to and critical commentaries on, the world-wide systematic review and economic evaluation literature for decision-makers. User feedback shows that commentaries are used to inform clinical decisions and the development of guidelines or clinical pathways. International reach is extensive with users based in over 200 countries. Our critical commentaries are disseminated in the USA in partnership with the National Library of Medicine (NLM), via PubMed Health. In 2012 the NLM reported access by over a quarter of a million users.

c. Strategy and plans

We will build on our experience of carrying out research that makes a difference and continue to take an active and developmental approach to promoting the uptake and use of our research to achieve societal impact. We will however be more explicit and take a more structured approach to capturing impact as it occurs. We will emphasise the following:

1. Adopt a research impact framework (from existing models in the UK and Canada) for use prospectively to: (a) help researchers systematically identify verifiable impacts related to their work; (b) better audit our impact, learn from successes/failures and share good practice;
2. Maintain and expand our strong programmes of policy and practice-relevant research funded directly by, or on behalf of, key stakeholders. For example, we will engage fully in the AHSN, with the newly funded Yorkshire & Humber CLAHRC 2 and other similar initiatives;
3. Strengthen our links with the policy and practice communities internationally and nationally to identify further initiatives through, for example, working with NICE International, OECD and increased investment in our visitors and secondments scheme.
4. Give early/mid-career researchers more opportunities to tap into the policy agenda through their involvement in policy research and membership of committees. Encourage staff to undertake University or external training on ways to promote impact;
5. Develop further our integration of the patient and public perspective and explore more effective ways of so doing. Make our stakeholder/advisory groups involving public, policy and practice representatives more effective in influencing our strategy and dissemination;
6. Build on and generalise the skills we have to translate our and others' research results into accessible and interesting messages for key audiences beyond academia and communicate effectively with the media (including new and social media);
7. Build capacity in knowledge exchange by hosting NIHR Knowledge Mobilisation fellowships and by increasing the number of NHS secondments;
8. Increase training to a broad community of policy makers, practitioners, patient groups, and journalists to improve the capacity to understand and use our research, so maximising impact.

d. Relationship to case studies

York has a significant track record of and reputation for achieving impact, and our impact case studies reflect the range of our research and illustrate the success of our approach to impact. The case study on *Allocating Resources in the NHS* illustrates the advantage of working in response to policy customers and developing this relationship over several years. A similar relationship developed with the DH subsequently in the area of *Measuring health service productivity*. Over the last 10 years these experiences have informed our approach to building a relationship with and having an impact on NICE. This forms the basis of the *Methods development in economic evaluation to support decision making* case study. The international/national impacts of these case studies (and *The impact of social inequality)* were enhanced by extensive international engagement with policy makers, by York researchers participating in bodies and events to influence policy, practice and methods development, and hosting visitors, all exemplifying other aspects of our approach to impact.

The benefit of focusing on identified uncertainties (following the research cycle) to help generate impact is illustrated by the *Improving primary care for depression* case study. We found that clinical practice was variable, identified further uncertainties through systematic reviews which we then addressed through primary research and led directly to policy development. Impact was also enhanced by actively engaging in initiatives specifically designed to help mobilise knowledge as illustrated in *The impact of social inequality* case study and the *Promotion and support of new-born breastfeeding case* study which *inter alia* showed the way that impact was generated by leading the Maternal and Infant Health and Care programme of the Yorkshire & Humber HIEC. The value of providing intelligence from the analysis of data on a regular basis or developing a tool which policy makers or providers can use routinely in promoting impact underpins two case studies, *Measuring health service productivity* and the development of the Patient case-management Information System (PC-MIS ©) which influences the behaviour of providers of psychological services outlined in the *Improving primary care for depression* case study.