

Institution: University of Stirling

Unit of Assessment: A3 Allied Health Professions, Dentistry, Nursing and Pharmacy

a. Context

Research users, beneficiaries and audiences

Our mission is to improve the health and wellbeing of patients and the general population and reduce health inequalities. We measure our success in terms of the extent to which our research: i) has been used to inform the development and implementation of new health policy and legislation; ii) has led to improvements in the quality, organisation and efficiency of services; iii) has improved professional practices by providing evidence for the development of professional standards, guidelines and training; iv) has impacted on patient outcomes through influencing the treatment and management of conditions; and v) has impacted on the health and wellbeing of the general population. The main users, beneficiaries and audiences of our research are:

Policy makers: We have a reputation for outstanding research that has a direct impact on the development of health policy at an international, national and local level. Research by **Watterson** (Case Study) on the scale and cost of occupational cancers has provided governments worldwide with a tool to assess the economic burden of occupational cancers and to develop and implement preventive measures. The work also provides the basis for new occupational cancer prevention and costing policies of organisations such as the Building and Woodworkers' International, which represents over 300 trade unions and around 12 million members in 130 countries. The global reach of this research has helped protect vulnerable migrant workers in developed and developing countries including Africa, India and South America. Our work on tobacco is recognised worldwide and has provided governments with robust and timely evidence to inform the development of tobacco control legislation. A systematic review conducted by **Moodie, Bauld** and colleagues for the Department of Health served as the basis for a UK wide public consultation on tobacco plain packaging in the UK. Studies by **Moodie** in particular on this topic played a vital role in ensuring the safe passage of the Australian plain packaging legislation and New Zealand's announcement of its' intention in February 2013 to implement similar legislation. Research led by **MacKintosh** and **Moodie** was also influential in the passage of legislation in England & Wales and in Scotland to ban the display of tobacco products and tobacco advertising at the point of sale. This work and that of **Bauld** and colleagues was included in the Universities submission on 'Protecting Children from Marketing', which received the Queen's Anniversary Award for Higher and Further Education in 2013.

Practitioners: Our research has a direct impact on practice by: influencing how services are delivered; providing evidence for the development of guidelines and standards; and influencing training and workforce development. Work by **Cheyne**, conducted in collaboration with the Scottish Government, will be influential in shaping the future configuration and delivery of Scottish maternity services. While a study of breast feeding conducted by **Hoddinott** and **McInnes** contributed to a move away from "breastfeeding-centred" care towards a mother-, baby- and family-centred approach. **Hoddinott** acted as an advisor to UNICEF and this research is incorporated into the new UNICEF Baby Friendly standards of care which are publicly available and which are endorsed by NIHCE Postnatal Care Guidelines as the minimum standard of infant feeding care. The study also led to the development of a Feeding Support Team telephone intervention (FEST), which has now been successfully implemented in a rural Aberdeenshire maternity unit, with discussions ongoing for wider implementation. **Lauder** et al and colleagues national evaluation of pre-registration education featured in the Willis Commission and informed NHS Education Scotland's response to Willis. **Lauder's** evaluation of Flying Start NHS has provided evidence of its effectiveness and it is now being rolled out across the UK and Australia.

Patients: Patients with pelvic organ prolapse, a condition most commonly associated with childbirth, have benefited from **Bugge's** work on the development of Pelvic Organ Prolapse Symptom Score (POP-SS) (Hagen et al 2010), which is used to monitor and provide feedback on progress of treatment. A recent survey found it is used by 20% of UK physiotherapists. POP-SS is also used in many NHS settings and is recommended for use in an Australian pessary guideline. Research by **Evans** et al. (2010) and others found no evidence to support the advice that Metformin, the first-line treatment for type 2 diabetes, was contraindicated for patients with heart failure. The research led to the updating of Metformin product monographs of several major Canadian manufacturers. The 2010 SIGN guidelines now explicitly state that Metformin is no

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longer contraindicated in patients with diabetes and heart failure. As many as 30-40% may develop heart failure at some point. Therefore, with 2.5 million people with type 2 diabetes in the UK and 250 million worldwide, the impact of this work is considerable. Patients with diabetes were also the beneficiaries of a systematic review on post-hypoglycaemic patient safety in the pre-hospital environment. Following its publication, the Joint Royal College Ambulance Service Liaison Committee (JRCALC) revised its guidelines on patient management. It now recommends that patients who are taking oral hypoglycaemic agents to control their diabetes and have a recurrent hypoglycaemic event within 48 hours should be transported to hospital.

General Population: Research into the evaluation of smoke-free legislation (**Haw, Bauld**) has demonstrated considerable health benefits for the general population, most recently, a reduction in stroke and adverse perinatal outcomes for mothers and their babies. The research in both Scotland and England & Wales has been influential in the development of smoke-free legislation in other jurisdictions, most recently in Spain, where partial restrictions on smoking in enclosed public places were extended to include bars and clubs. Our work has also had an impact on vulnerable groups in the population. A study of the needs of prisoners with alcohol problems resulted in the allocation of additional funding by the Scottish Government to develop interventions for alcohol problems in Scottish prisons. The study also contributed to recommendations in the *Health in Prisons Guide: A WHO guide to the essentials in prison health*. Finally, research conducted for the Scottish Ambulance Service led to the development of the Vehicle Equipment Check-Sheet (VECS), a prioritised equipment check-sheet. VECS is now the national tool that all Scottish ambulance service clinicians use at the beginning of each shift to ensure that all the equipment they need is present and functioning. The value of VECS was recognised and commended at a public Fatal Accident Enquiry.

b. Approach to impact: To ensure that our research has impact, we are committed to:

A solution-oriented, multi-disciplinary approach that creates a synergy between NMAHP researchers and researchers from other health-related disciplines, thus ensuring that we have the necessary skills and expertise to address the challenges of improving the health of the people of Scotland and elsewhere.

A programmatic approach to research that focuses and consolidates areas of expertise into work streams. Compared with a series of stand-alone projects, an integrated research programme maximises grant capture and the likely impact of the research. NMAHP-RU has led the way in the development of this approach. It has implemented the use of a tool to screen all new projects to ensure that: the problems being investigated fall within the remit of the unit and links to other projects already underway; are significant in terms of size, severity of problem or patient/policy priority; and the necessary skills and resources are available to deliver a high quality project. The benefits of this approach have been demonstrated by an increase in grant capture rate to over 50% by NMAHP-RU in the last two years.

Joint development (co-construction) of research ideas with the involvement of policy makers, professionals, patients, carers and the public at all stages of the research right from the very start and throughout the research process: Members of all the research groups have close links with policy makers at a national level. **Maxwell**, for example, plays an important role in influencing the research agenda of the Scottish Government Mental Health Improvement Research Priorities Working Group, while our work across all research groups routinely involves discussions with policy leads in the Scottish and UK Governments at the very start of a project, ensuring that the research is directly relevant to current policy developments. **Haw** has worked closely with the Scottish Government, Trading Standards and ASH Scotland during the development of an NIHR proposal to evaluate the point of sale legislation in Scotland. The steering group includes policy makers and representatives from the Third Sector. **Bauld** played a key role in the development of the Scottish government's 2013 tobacco control strategy, which contained a commitment to pilot ASSIST, a peer-led smoking prevention intervention that will be evaluated by us. The commitment to working with clinically active professionals and patient groups is demonstrated by **Cheyne's** consultation work with mothers (MIRAS); the design and delivery of the Scottish Maternal Survey and the development, in partnership with the Scottish Government and NHS Tayside, of the Scottish Person Centred Interventions Collaboration (SCOPIC), which is conducting an evaluation of ward-based interventions to improve patient experience. We also routinely involve patients,

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community groups and carers as grant holders. Recent examples include mother and baby groups as grant holders on a study of the use of incentives in pregnancy (**Hoddinott**) and patients and carers in a study of urinary incontinence (**Bugge**).

Effective dissemination and translation of research: We use a variety of routes to communicate and disseminate our research. Regular updates on research activity are provided through quarterly newsletters, the main University website and several project-specific websites. In addition to conference presentations, research findings are presented to wider audiences through a regular seminar series and through research briefings tailored to the needs and interests of particular audiences. Of particular importance is direct engagement with opinion leaders, policy makers and practitioners to discuss the implications of the research and to generate recommendations, throughout the course of a study. The national evaluation of the impact of the Scottish point of sale legislation to ban tobacco advertising has set up briefing sessions to provide regular feedback to senior health policy leads during the course of the 6-year study. The team are also committed to providing individualised feedback of findings to participating secondary schools in the form of briefing sessions and the provision of bespoke individualised datasets for use in the curriculum by the schools involved.

c. Strategy and plans

Since the last research assessment exercise, we have dramatically extended our research collaborations and increased our capacity to conduct research of the highest quality which has proven impact. Within the University we have worked closely with colleagues from the School of Nursing, Midwifery & Health, School of Natural Sciences, School of Sports and the Stirling Management School. We have built collaborations with patients, carers, academics, policy makers, practitioners, patients, carers and the third sector from across Scotland and the UK and we currently collaborate with research colleagues from over 20 countries. Our immediate priority is to extend the reach, significance and impact of our current and future programmes of research, by working with colleagues (from all our stakeholder groups) to establish a pan-university Institute of NMAHP and Applied Health Research with an international reputation. We will work to ensure that the infrastructure, organisation and processes are in place in the new Institute are consistent with our principles: a solution-oriented, multi-disciplinary and programmatic approach to research; the co-production of research involving service users and taking account of public perspectives; and a strategic approach to dissemination and research translation.

d. Relationship to case studies

Our case studies exemplify our strategic approach to impact. **Watterson** engaged not only with policy makers in the UN, but with trade unions and civil society, thus ensuring that the research would be used in the development of The 'Zero Cancer campaign' and easily incorporated as best practice into the union movement's action on "chemical management". The policies were adopted worldwide by trade unions and, in particular, leading to the better protection of vulnerable migrant workers in developed and developing countries, including Africa, India and South America.

The research by **MacKintosh** and **Moodie** that informed the development of the point of sale legislation in Scotland and England and Wales is an exemplar of a programmatic approach to research. It had been developed in consultation with policy makers in the UK and research funders with the explicit intention of filling the evidence gap. A CRUK-funded evidence summary based on the Stirling research and the research of others was robust, concise and accessible to non-academics. In addition, it was available in time to inform both the drafting of the legislation and the debates in the Scottish and UK parliaments.

The work by **Wilson** on traumatic brain injury (TBI) outcomes demonstrates the value and impact of inter-disciplinary collaboration in research, which, in this case, led to the co-construction of instruments that filled important gaps in the field and that were useful for practitioners. For the Glasgow Outcome Scale – Extended (GOSE), the collaboration was with neurosurgery and took place in the context of awareness of shortcomings in industry-sponsored clinical trials conducted in TBI, while the Quality of Life after Brain Injury Scale (QOLIBRI) collaboration included clinicians working in rehabilitation aware of the need for quality of life tools. In both cases uptake was promoted by placing the assessment material in the public domain, and by engaging with international networks.