The Preventative Agenda in Health and Social Care: A Paper for the Scottish Parliament’s Health and Sport Committee

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Key Messages

1. Prevention strategies are good in principle but very difficult to implement successfully.
2. There is a clear need to develop research capacity to support a prevention agenda in health and social care. Two actions that would help:
   a. More Scottish Government support for academic social care research.
   b. Establishment of a Scottish longitudinal study of ageing.

Introduction

Investing in preventative spending seems like a no-brainer. If we know that improved diet during pregnancy improves children’s health outcomes, why not subsidise healthy eating for pregnant women? Scotland’s policymakers often claim that they are following a “preventative agenda”, but the cases where Scottish Government policies have clearly demonstrated a preventative effect are rare.

This paper reviews the difficulties of successfully implementing preventative strategies, particularly in health and social care. It then examines the structure of research in these areas: high quality research is essential to provide the evidence both for the introduction of preventative policies and for establishing their success or failure. Finally, we make the case for the introduction of a longitudinal survey of ageing in Scotland to provide a foundation for evidence relating to a wide range of preventative policies.

Barriers to Effective Prevention Policy

Successful interventions to prevent negative outcomes, such as a frail elderly person falling, requires: (1) understanding why the negative outcome occurs, (2) understanding how a policy intervention can prevent its occurrence and (3) successful implementation of the policy. Each of these stages is necessary, but for many applications is highly complex. We discuss these in the remainder of this section.

Understanding why negative outcomes occur

The UK has a distinguished history in the use of evidence to prevent adverse health outcomes. One example is William Farr’s statistical evidence which exposed the causes of cholera in London. His data and analysis helped identify the source of this disease (London’s water supply), which in turn led to successful water purification policies. Careful analysis of data saved thousands of lives because:

1. a decision was taken to collect relevant data (which was based on a theory, or hunch, connecting cause and effect),
2. careful statistical interpretation of these data was carried out, and
3. the policies indicated by the analysis were implemented.

There are other examples in public health where data has been effectively deployed to help prevent illness and disease. However, for some problems, the collection of evidence is not straightforward because the processes leading to the negative outcome (e.g. obesity) are not fully understood, and/or are contested. This is particularly true where the sources of disease or chronic conditions may be social and/or economic. In these circumstances, the policy analyst has several challenges:

- Does the evidence being collected address the underlying problem? Social and economic processes are inherently complex. Without an understanding of their structure, it may not be clear what evidence to collect.

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1 Related analysis of the use of evidence in policy by Professor Paul Cairney is available [here](#) and [here](#).
2 William Farr is recognised as the father of medical statistics and his contribution has recently been recognised through the creation of the Farr Institute, whose Scottish hub is at the University of Dundee.
• *Is the source of the evidence unbiased or self-serving?* Evidence from bodies wishing to use evidence for their own advantage should always be treated with caution.

• *How accurate is the evidence?* Information can be collected in different ways. Personal or household surveys are among the most common sources. Accuracy increases with sample size, but there will always be a margin of error. There is always a risk that the collected sample is not representative of the population. Even with a correctly designed survey, the link between policy cause and social or economic effect cannot be known with certainty. Risk-averse politicians may therefore lose their enthusiasm for preventative interventions.

• *How general is the evidence?* If the intention is to apply preventative policy to the whole of Scotland, then the evidence should represent all of Scotland’s population. This may be challenging, given the diversity of Scotland’s physical, social and economic geography.

• *Does the evidence correctly identify cause and effect?* Imagine that one collected a survey which found that recently retired individuals were unhealthy. Does this imply that their poor health caused them to retire or that retirement had an adverse effect on their health? The policy implications are quite different. There are a variety of statistical methods that can be used to distinguish cause and effect. We describe one of these below.

• *For how long has the data been collected?* One way to aid identification of cause and effect is to establish which occurred first. Cause should be observed before effect. But sometimes the gap between cause and effect can be long. For example, exposure to an occupational hazard may take years, or even decades, before it affects individual health. The adverse health effects of exposure to asbestos can take decades to occur. Linking cause and effect for someone exposed to asbestos therefore implies a need to collect data on individuals over long periods of time. Studies that collect data on the same individuals over time are described as longitudinal. In the final section of this paper we make the case for collecting a longitudinal survey of ageing in Scotland to better understand the policy challenges that the nation faces in relation to population ageing.

**Implementing Preventative Policy**

The *implementing* of preventative policy is also challenging. Some of the difficulties include:

• *Assessing when the benefits from the policy will occur.* Some policies may take a long time to bear fruit. Early years interventions may reduce unemployment and crime rates after children become adults. Such timelines extend well beyond the electoral cycle, meaning that the politicians who introduce preventative policies are unlikely to still be in office when the benefits of the policy are realised.

• *Establishing costs and benefits for other stakeholders* Suppose that the policy intervention is correctly identified, but its implementation involves imposing changes on local government and/or health boards. Unless such change can be negotiated amicably, the Scottish Government must trade off the costs of damaged inter-governmental relations against the benefits arising from preventing adverse outcomes.

In the next section, we examine existing arrangements for researching health and social care in Scotland. This will help identify likely sources for evidence to support the preventative agenda. In the final section, as mentioned above, we argue the case for establishing a longitudinal survey of ageing in Scotland to provide a wide-ranging source of suitable evidence to underpin the preventative agenda in relation to health and social care.

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3 The [UK Statistics Authority](https://www.uk-statistics-authority.gov.uk) exists to support the “statutory objective of promoting and safeguarding the production and publication of official statistics” - in other words to ensure that users of official statistics have confidence that they have not been meddled with. It reports directly to the Scottish Parliament.

4 Though there are other forms of evidence that can be collected, we focus on surveys as the most reliable way to collect unbiased information on Scotland’s entire population.
Research in health and social care in Scotland
The Scottish Government’s Health & Social Care Directorate is responsible for strategic leadership for public health, NHS Scotland and social care\(^5\). Health research is supported by the Chief Scientists Office (CSO). The CSO funds 6 research units across Scotland\(^6\): Health Services Research Unit (HSRU) and Health Economics Research Unit (HERU) both at the University of Aberdeen; Social Public Health Sciences (SPHSU) at the University of Glasgow, Nursing and Allied Health Professions (NMAHP RU) at Glasgow Caledonian and University of Stirling and the Scottish Collaboration for Public Health Research Policy (SCHRP) at the University of Edinburgh. Social care research is commissioned and conducted by the Health Analytical Services Division, Scottish Government. Its role is to provide research-based evidence for health and social care policy development\(^7\), with the Information Services Division (ISD) of the NHS National Services Scotland providing statistical support.

Thus policy-focused health research in Scotland is carried out in academic research units across a range of specialisms. Social care research, conducted by the SG Health Analytical Services Division (HASD), has no academic home. This contrasts with England and Wales, where both health and social care research are provided by specialist academic researchers.

In Wales, the National Institute for Social Care and Health Research (NISCHR) develops strategy and policy for research. Its research infrastructure is designed to increase research capacity for current and emerging research areas. The School for Social Care Research, based in Swansea University (in collaboration with Cardiff University and Bangor University) aims to increase the capacity of social care research to develop evidence-informed policies and services across Wales\(^8\). Health research is distributed across several centres (Centre for Ageing & Dementia Research, National Centre for Mental Health, National Centre for Population Health & Wellbeing, Primary & Emergency Care (PRIME), and the Wales Cancer Research Centre) and Research Units (BRAIN, diabetes and kidney research units)\(^9\).

In England, the Department of Health (DH) funds health and social care research via the National Institute for Health Research (NIHR). The NIHR works across six broad themes to encompass the funding of research and the training of researchers and leaders. Three national schools were established covering Primary Care (SPCR), Public Health (SPHR) and a dedicated Social Care Research (SSCR) unit. Each school is a collaboration of academic centres. SPCR involves 9 institutions\(^10\), the SPHR 8 institutions\(^11\) and the SSCR 5 institutions\(^12\). The DH also funds specific policy development through its Policy Research Programmes such as the Policy Research Unit in Cancer Awareness, Screening and Early Diagnosis\(^13\).

England and Wales fund academic research centres to support the health and care policy debate, while Scotland supports academic research for health but not social care. Given the importance of the social care agenda in Scotland, this seems to be a major gap in Scotland’s research infrastructure. The Scottish Government social care analysts provide a great deal of useful information, but are constrained by their other commitments. The Schools for Social Care Research in both England and Wales are charged with identifying and prioritising social care research activity and to support knowledge translation into practice.

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\(^5\) See [www.sehd.scot.nhs.uk/aboutus.html](http://www.sehd.scot.nhs.uk/aboutus.html)
\(^6\) See [www.cso.scot.nhs.uk/research-units/](http://www.cso.scot.nhs.uk/research-units/)
\(^8\) See [www.swansea.ac.uk/media-centre/latest-news/thewaleschoolforsocialcareresearchofficiallylaunches.php](http://www.swansea.ac.uk/media-centre/latest-news/thewaleschoolforsocialcareresearchofficiallylaunches.php)
\(^10\) University of Bristol, University of Cambridge, Keele University, University of Manchester, Newcastle University, University of Nottingham, University of Oxford, University of Southampton, University College London
\(^11\) University of Sheffield, University College London, University of Cambridge, LiLaC collaboration between the University of Liverpool and the University of Lancaster, Fuse, Centre for Translational Research in Public Health: a collaboration of Newcastle, Northumbria, Sunderland and Teesside universities, Peninsula College of Medicine & Dentistry and the London School of Hygiene and Tropical Medicine
\(^12\) London School of Economics, University of Bristol, University of Kent, University of Manchester, University of York
\(^13\) See [www.wolfson.qmul.ac.uk/centres/ccp/pru](http://www.wolfson.qmul.ac.uk/centres/ccp/pru)
through links with social care service providers. Social care research in Scotland is inadequate, given the challenges that the nation faces.

If Scotland is to address prevention issues to identify cause and effect, then the type of study undertaken is of key significance. Cross-sectional (snapshot) studies, such as the Scottish Health Survey and Scottish Household Survey, are effective in monitoring trends in population health over time. They are of little value in identifying cause and effect. Only longitudinal studies, where the same people are followed over time, can identify the sequence of events (and their association with other factors) that helps distinguish cause and effect.

The Scottish Government currently supports two longitudinal surveys: Growing Up in Scotland and the Scottish Longitudinal Study. Growing Up in Scotland is focussed on childhood. The Scottish Longitudinal Study (SLS) pulls together administrative and statistical data sources to produce a large-scale linked data resource. Administrative data linkage is not unique to Scotland, but Scotland’s capacity to link data across a range of administrative sources is one of our world class assets. SLS links census data, vital events (births, deaths and marriages), population (immigration and emigration) and health data (cancer registrations and hospital episodes) for around 5% of the Scottish population (approx. 274,000 individuals).

While SLS is a useful resource, it cannot address key issues of cause and effect in our ageing population because the administrative data do not capture key lifecourse events such as employment, retirement planning, income and wealth, cognition, health behaviours and attitudes - the type of data collected by longitudinal surveys. Were appropriate survey data available to be linked to administrative data, then we could have the best of both worlds. Given Scotland’s almost unmatched capacity for administrative data linkage, we now explain how a longitudinal survey could be used to design and evaluate preventative spend policies for relating to health and care provision among Scotland’s ageing population?

The Gateway to Global Ageing is a platform for harmonised longitudinal ageing studies across the world. It began in 1992 with the Health and Retirement Study (HRS) in the USA. This study has followed over 30,000 individuals aged over 50. Similar studies were subsequently set up in Brazil, Mexico, Korea, India, Japan and China and closer to home, in Europe (20+ European countries plus Israel), in the Republic of Ireland, in Northern Ireland and in England. Together, these studies have had a massive effect on policy relating to ageing.

The English Longitudinal Study of Ageing (ELSA), has been running since 2002 and has completed 7 waves (i.e. the survey has been repeated seven times with the same group of people). In addition to demographic and health data, these studies collect information on issues such as retirement planning, financial literacy, well-being, social isolation, income and wealth and cognitive decline. A group of questions are asked in each country. Comparative data provides another powerful tool for collecting evidence. Are older Americans more likely to suffer chronic conditions than those in Scotland? What aspects of their past behaviours, circumstances or experience explain health differences between Scotland and the USA?

Scotland and Wales are the only parts of the EU not to have a longitudinal survey of ageing. Yet Scotland’s mortality and morbidity rates are significantly worse than most parts of the EU, even though on most economic indicators, it performs close to the EU average. It has considerable autonomy to set policy for older people in general, for their health and their social care. And its new welfare powers have more impact on older people than the young because they principally target disability. Given these differences, preventative policy lessons from elsewhere will not necessarily transfer to Scotland. A Scottish longitudinal

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15 See //g2aging.org/index.php?section=homepage
16 Longitudinal studies follow the same people over time but will always lose some participants along the way, either because they no longer want to take part, cannot be contacted or may have died. Each new wave will therefore recruit new participants to replace those lost and to bring on board those who have since become eligible to take part.
study of ageing could be an effective tool for providing the evidence base for preventative health and social care policy.

A feasibility study for Scotland’s first longitudinal ageing study, called Healthy Ageing in Scotland (HAGIS) is underway. It is funded by the National Institute of Aging in the USA and by the Nuffield Foundation. These bodies are particularly interested in comparisons between Scotland’s older people and those in the USA and England. The feasibility study is also harmonised with similar studies in Ireland, Northern Ireland and Europe.

Conclusion
This paper has discussed obstacles to the implementation of a successful preventative agenda in health and social care. It has also reviewed the research environment which should help to identify the evidence needed to support such a preventative agenda. It has also noted the weakness of academic links to research on social care in Scotland, arguing that this will be to the detriment of Scottish Government policy. Finally, it has made the case that longitudinal studies provide a rich source of evidence for the preventative agenda and that Scotland should join other parts of the UK, Europe and the world in establishing such a survey.

17 Professor David Bell is the principle investigator of HAGIS and Dr Elaine Douglas is the Research Fellow/Project Manager on the study.