

Annex 5

THE NPRI SCIENTIFIC REVIEW GROUP (SRG)

RESEARCH PRIORITISATION WORKSHOP

SCOPING FUTURE OPPORTUNITY IN PREVENTION RESEARCH

**1 and 2 October 2014
Royal Berkshire Hotel, Ascot**

Introduction

A workshop on prevention research priorities was held over 2 days in Ascot on 1 and 2 October 2014 to develop potential priority areas. The discussion aimed to identify opportunities in the light of the current landscape of public health research relevant to prevention. This is a summary report to reflect the views expressed at the workshop.

Intended Audience for This Report

The intended audience for this report includes all those involved in the research process for prevention research including academics and other researchers, Research Councils, health research charities, other research funders and commissioners.

About the workshop

The workshop was split into three activities:

1. Four presentations giving an overview of the NPRI portfolio, the public health landscape (two presentations) and the best way of working with policy makers to increase the potential for translation into policy and practice
2. Open discussion in plenary sessions
3. Two group sessions where participants were split initially three groups to draw up potential future research themes and them into two groups to synthesise these.

After presentations and discussion on the changing landscape for public health, participants were divided into three groups with a mix of expertise to draw up a list of research themes for future primary prevention research.

Summary of findings

Table 2 on page 34 summarises the key research priorities identified during the discussion on day 1. Further finessing of these priorities occurred on day 2 leading to the two themes listed on page 66. The discussions leading to these priorities can be found in the accompanying text.

DAY 1

The Chairman reminded the Group that the aim for the workshop was to scope future opportunity in prevention research and that should be informed by the NPRI evaluation. Discussion was informed by a presentation on the public health landscape from Dr Janet Valentine and reflections on public health research in NIHR by Professor Catherine Law. Dr Gavin Malloch also relayed the perspective of the NPRI grant-holders.

Context

Changing Funding Landscape – Presentation by Dr Janet Valentine

The two UK Health Research Analysis report published in 2006 and 2012 provided an overview and comparison of all types of health research activity for the year 2004/5 and 2009/2010. Both used the Health Research Classification System (HRCS)⁶ and included the health research portfolios of 12 of the largest government and charity health-related research funders. Both analyses had highlighted the relatively low investment in prevention research. Funding for primary prevention¹ research by those contributing to the UKCRC HRCS analysis of 2004/5 showed a Figure of £4,976,166 for primary prevention (0.5% of total spend) with CRUK and MRC the major contributors. Funding for primary prevention increased to £21,730,313 (1.3% of total spend) in 2009/10 when MRC and DH/NIHR were the major contributors. The expansion was notably due to DN/NIHR (from £1.35m to £10.7m in 5 years).

The 2004/5 report captured the research spend of the Department of Health just prior to the establishment of NIHR. The Department's budget for research and development increased 48% between 2004/05 and 2009/10 and the total spend on research for all the funders increased from £965m to £1,636m.

During the life time of the NPRI there were significant changes in public sector funding responsibilities and funding for public health. Therefore it was important that the SRG took into account these changes and available funding schemes in their deliberations.

The HRCS analyses in 2002 and 2006 had catalysed multi-funder reviews and joint initiatives. The first of these new initiatives was the NPRI. The other major joint funding initiative was the UKCRC Public Health Research Centres, established to strengthen public health research in the UK and build capacity across public health research. The Centres now in their second five year funding term had increased the UK public health research infrastructure (£16m total investment) and engaged with stakeholders in policy and practice to facilitate the translation of research. In addition to joint funding schemes, individual funders had also initiated dedicated public health initiatives including the NIHR Public Health Research programme, the NIHR School for Public Health Research and the MRC Public Health Intervention Development (PHIND) scheme. Most funders had fellowships schemes that were open to public health researchers with some having specific population health fellowship schemes.

Reflections on public health research – Presentation by Professor Catherine Law

Professor Law provided her reflections on public health research based on her experience after 6 years as Programme Director of the NIHR Public Health Research Programme. She emphasised that her views were personal and not necessarily the views of the NIHR.

Professor Law highlighted progress in the availability of funding streams, increasing capacity development, use of secondary data sources/resources and epidemiology; and multi-disciplinary/team science.

There was also significant challenge including the need to further the capacity to develop innovation and move the research agenda away from “more of the same”. There was also inherent caution and conservatism in peer review and there remained a significant academic/practice gap.

Taken together this provided opportunities in intervention development, research on/in/with systems, context specificity, operationalizing a life-course approach, and in addressing inequalities. There were opportunities for more patient and public involvement and working with industry. Further work is needed in generating evidence syntheses to assist public health decision making.

In discussion the SRG commented that while risk factors had become common proxy outcomes for diseases it was not clear what the size of the effect of these risk factors were on specific disease causation. The issue of how to innovate methods to evaluate policy using short time frames was also raised.

The views of the NPRI grant-holders – Dr Gavin Malloch

Dr Malloch reported that during the interviews with NPRI grant-holders they had been asked for their views on the future of prevention research in the UK. They had reported a wide range of future challenges and opportunities in prevention research, which was to be expected given the wide range of research areas they were working in. The types of challenges and opportunities presented by the grant-holders could be grouped into different categories; target health behaviour/outcome, intervention type/approach and underpinning factors.

The grant-holders suggested fourteen target health behaviours or outcomes that are challenges for the future with the most common suggestions being diet/obesity and tobacco and alcohol. This appeared to reflect their own research interests. The grant-holders suggested a range of intervention type and approaches as a priority for the future. There was support for continuing behaviour change approaches at the individual level but the most frequently cited intervention type was national policy change as seen in Table 1, reflecting a growing view that this was the most effective way of bringing about change in large populations despite their inherent lack of political and public support. There was comparatively little mention of whole systems approach.

INTERVENTION TYPE/APPROACH	NUMBER OF GRANT-HOLDERS
Policy change	11
Population/environment change	8
Individual behaviour change (incl. understanding and maintenance of)	8
Whole systems approach	3

Table 1. Intervention type/approach

The grant-holders were also questioned on two aspects of how the future challenges in prevention research might be supported; the most appropriate type of funding and supporting research outputs into translation. By far the most common response (n=21) was to continue the NPRI (that is launch ‘NPRI-5’) but nearly as many

(17) raised the need to support feasibility work. The latitude within the NPRI to carry out feasibility work and then implement the findings within the ambit of the NPRI grant, or with follow-up funding was particularly welcomed. The MRC Public Health Intervention Development Scheme (PHIND) was mentioned as a positive addition to the funding landscape but that more funding in this area would be beneficial.

Grant-holders also suggested several routes to enhancing research outputs and translation as shown in Figure 1.

Many grant-holders felt that funders could do more to support research outputs and translation into policy and practice. Fifteen of the grant-holders commented that targeted specific funding at the end of the award to support translation activities would be beneficial. Some of the grant-holders had established good relationships with policy makers but the difficulty of engaging with the right people was raised as a concern. Grant-holders commented that funders are well placed to facilitate this engagement.

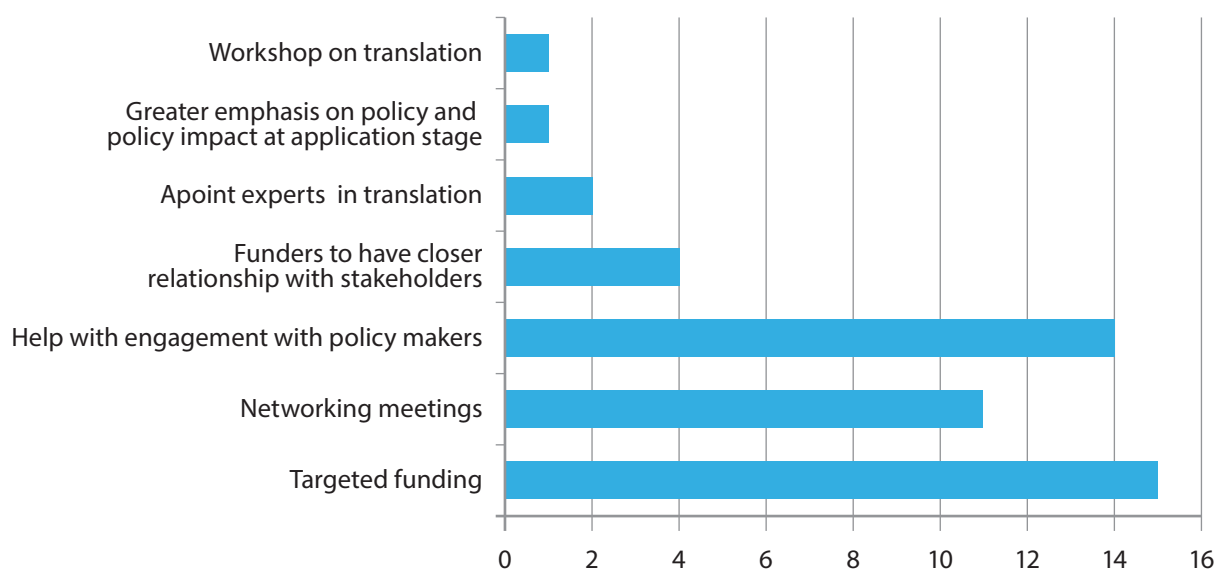


Figure 1. Funding and activities to support research outputs

Future opportunities: Identification of research challenges

Participants were divided into three groups with a mix of expertise to draw up a long list of research themes for future primary prevention research. The three groups then combined in plenary to share thoughts, leading to a combined list of research themes.

During the plenary session, delegates noted that common themes had clearly emerged during the breakout discussion. Noticeable was the agreement around the need to identify how, when and why an intervention was successful so that opportunities for scalability and use in different contexts was maximised. Some NPRI-supported research projects may have been effective due to the nature of the delivery vehicle for example, or because it had targeted a 'teachable' moment which had been an unexplored opportunity. Understanding the mechanisms of an intervention was considered a need, and an opportunity for the development of new interventions, as well as a more efficient use of existing ones. It would inform on why interventions did not work which might in turn inform disinvestment which was a current focus of policy makers given fiscal austerity measures.

The delegates also raised an approach to delivery based on 'systems thinking', taking account of the complex social system of a community, school or worksite in such a way as to maximise the impacts of interventions.

Delegates raised the notion of working towards a 'health improvement system' in which resources might be moved around the system to maximise the efficiency of population health improvement.

Across all these areas there was clearly opportunity to exploit recent developments in trial methodology and to build on current progress in informatics.

Summarising the research challenges

Following the plenary feedback at the end of day 1 the research challenges identified were summarised into research themes under sub-headings as shown in table 3.

METHODS AND DESIGN	UNDERSTANDING THE ACTIVE INGREDIENT OF INTERVENTIONS	TEACHABLE MOMENTS	SYSTEMS APPROACH	COMMUNITY/ POPULATION INITIATIVES
Operationalising the life course approach	Generalisability - ability to apply an intervention to different setting and target groups	Targeting interventions at teachable moments and transitions – Do we know enough about what they are?	Mapping and identifying key nodes for change in complex systems	Community network analyses
Modelling	Scalability			Measuring economic and wider benefits
Better use of existing data	Delivery vehicles			
Developing surrogate markers	Understanding mechanisms of behaviour change			

Table 2: Summary of 'day 1' research themes under sub-headings

Day 1 ended with a talk from Dr Tim Wilson, Partner, Health Industries, PricewaterhouseCoopers LLP. He highlighted the advent of the internet and social media and the use of these new technologies to monitor behaviour, for example through smartphones. The older models of communication and monitoring on which the NPRI were originally based are now outmoded so there was a challenge around understanding how these new approaches are relevant and how they can be used most effectively.

DAY 2

Policy needs in prevention research.

The day opened with a talk by Professor Susan Jebb on the policy needs in prevention research. Professor Jebb highlighted how academic research sets the scene but does not take the outputs far down the track to policy and practice. The need for less observational data which describes a known problem and more solution-focused research - what, when and who should act, the costs and benefits, the risks to everyone involved, was highlighted.

When consulted about their research needs, policy makers identified the following:

- Visionary: Modelling of future trends, future scenarios
- Creative: ahead of policy agenda, not lagging behind
- Solution-focused: a coherent intervention/strategy for change
- Process measures: e.g. feasibility, sustainability, equity
- Holistic: Consideration of wider benefits and unintended consequences, comparisons with other policies
- Economic: ROI, making the business case for investment
- Qualitative: what do consumers think/want?
- Engagement: Involving policy makers

The following were proposed as helpful to address policy maker needs and closer engagement between academic researchers and policy makers:

- **Describe the range of options available** - Frameworks which set out the policy options (education, choice architecture, fiscal etc.) are popular and stimulate thinking.
- **Consider new thinking from scientific community** the notion of the 'causes of the causes' shaped new thinking, (perhaps 'systems' analysis is the next step)?
- **Document other benefits to health or wider society** - useful in developing impact assessment and engaging interest across government e.g. benefits of active travel for health, environment and social cohesion, or reductions in meat on health and sustainable agriculture.
- **Consider the risks, especially of unintended consequences and how can these be mitigated** – for example could health inequalities be widened by the approach proposed.
- **Measure cost effectiveness** - Assessment of costs and benefits, refining assumptions in standard models. Great opportunity to develop more sophisticated methods which reflect the inherent uncertainty.
- **Consider the Impact of policies on inequalities** - Need for specific research to prioritise the most vulnerable groups by age, gender, SES, region. Recognition that despite years of effort, very few signs of closing the gap. Need new approaches to this issue.
- **How acceptable are the policies to stakeholders/public?** - Qualitative research is highly valued, but more needed to explore the gap between public perceptions and actual behaviour.
- **How can opinion be mobilized to support policy action?** - Accepting that some interventions may not be acceptable in current climate, how can we create social movements for change?
- **Summaries** - Evidence synthesis across a body of research and citizens in the discussion.

Expansion of the research themes

Having endorsed the summary of themes, the delegates broke out into two new groups to add further details to the research themes from day one. The following points were raised when reporting back:

Group One

- Innovative methods need to be embedded within the research
- The 'active ingredient' needs to be identified – requires multi-level conceptual frameworks that are grounded in theory and context to understand the mechanism of behavioural change
- Translation into what works, for whom, when and in what circumstances
- More population level interventions are required that are at a systems or area level – multi-dimensional
- Greater participation and engagement with stakeholder is needed to identify priorities and deliver interventions through co-production
- Working up systems level interventions will require workshops with the community and stakeholders – this could not be delivered immediately through a call for proposals

Group Two

- More theoretical research to understand impact on health outcomes of health and non-health based interventions – testing theories and learning from the past
- A life course approach is needed with interventions tailored to suit different needs at different ages – identifying the optimal point for intervening
- Should be shift towards more population based research moving away from individual level-interventions

Synthesising the research themes

The groups then reconvened in plenary to highlight key overarching issues and to finally synthesise the research themes into a smaller number of topics

Key overarching issues

TO IMPROVE THE PROSPECTS FOR TRANSLATION OF INTERVENTIONS

In terms of gaps more thought was needed to ensure that studies adequately captured possible interactions and confounders, effect size, SES and target population metadata. To improve the prospects for translation of interventions in different settings studies should seek to elucidate the theory and mechanism of an intervention so that the 'active ingredients' that underpin the success or generalizability of an intervention are known i.e. identifying the 'active ingredient' of why an intervention was successful (or not).

COMPLEX AND INTERLINKED OVERLAPPING SYSTEMS

The focus for prevention needs to shift to take a whole systems approach, thinking about the population and the environment, not the individual. Systems approaches require us to think about all of the elements that create an environment, community or setting. Secondly, the Group highlighted the observation that most research tends to focus on one intervention and its effect on a limited number of outcomes when the reality is that the research takes place in highly complex systems where there are wider determinants and multiple synergistic influences. Co-production and engagement with stakeholders was seen as crucial to design complex systems-based intervention approaches.

METHODOLOGY AND DATA

Methodological research is needed to develop and evaluate behaviour within complex systems. Existing data sets need to be more open, easier, and cheaper to access to allow more secondary analysis/reanalysis of existing data sets. Better ability to link social care and health data would also facilitate further research.

ADDITIONAL ISSUES ARISING

Delegates also recorded the elements that were considered to be essential or desirable components of future research projects. The delegates agreed that:

- research should evaluate health outcome measures of health and non-health interventions
- there should be more scope to evaluate existing interventions
- prevention should include primary and secondary prevention in the context of promoting health in groups with existing conditions
- extending the existing NPRI focus to other communicable diseases linked to risk taking behaviours would help meet the challenge of emerging public health issues such as gambling
- there was a need for more comprehensive collection and reporting of SES data
- it should be mandatory to publish study findings regardless of the outcome
- researchers must engage with appropriate stakeholders such as end-users
- prevention research could benefit from being more embedded in other academic disciplines such as informatics, trial design and social science to maximise the innovation possible

Conclusion – the research topics identified

The Group concluded that there are opportunities given the developments in the field and expertise now available to develop a strategic approach to future prevention research. There was agreement that gaps in the research prevention landscape still existed even given the NIHR public health research programme and the MRC PHIND scheme. The two areas that the group agreed were currently not covered or where there was potential for a new or multi-funder scheme were:

- Intervention design – mechanisms and methodology to identify the active ingredients of new or existing interventions
- Interventions delivered using a systems and complex population/area level approach

Research prioritisation workshop - Participants and agenda

AGENDA DAY ONE

TIME	AGENDA ITEM	FORMAT	LEAD
15:05 to 15:15	Context – the public health landscape	Presentation	Janet Valentine
15:15 to 15:25	Reflections on public health research in NIHR	Presentation	Catherine Law
15:25 to 15:35	Feedback of possible areas for future focus	Presentation	Gavin Malloch
15:35 to 15:40	Aims of break-out groups	Presentation	Gavin Malloch
15:45 to 16:30	Developing and clustering themes for new opportunities in prevention research	Break out groups	
16:30 to 17:15	Feedback and discussion of themes	Plenary	

AGENDA DAY TWO

TIMES	AGENDA ITEM	FORMAT	LEAD
08:30 to 09:00	Policy needs in prevention research – the diet/nutrition example	Presentation	Susan Jebb
09:00 to 09:05	Aims of next break-out session	Presentation	Janet Valentine
09:05 to 10:15	Synthesis of research challenges from clusters on day one	Breakout in new groups	
10:15 to 10:30	Break		
10:30 to 11:15	Plenary session for feedback		
11:15 to 11:30	Short break while funders and Chair draw up themes		
11:30 to 11:45	Prioritisation on importance		
11:45 to 12:00	Summary of decisions and further action		Phil Hannaford
12:00	End of meeting		

ATTENDEES

SRG MEMBERS			
Professor	Philip	Hannaford (Chair)	University of Aberdeen
Professor	Linda	Bauld	University of Stirling
Professor	Rona	Campbell	University of Bristol
Professor	Cam	Donaldson	Glasgow Caledonian University
Professor	Susan	Jebb	University of Oxford
Professor	Theresa	Marteau	University of Cambridge
Professor	Tim	Peters	University of Bristol
Dr	Andrew	Fraser*	NHS Health Scotland
Mr	Paul	Lincoln*	UK Health Forum
Mr	Chris	Roberts	Welsh Government

FUNDERS			
Dr	Kate	Allen	World Cancer Research Fund International
Dr	Nicola	Armstrong	HSC Research & Development Division, Public Health Agency (NI)
Mr	Michael	Bowdery	Health and Care Research Wales ⁷
Dr	Kate	Holmes	Stroke Association
Dr	Christine	McGuire	Department of Health
Dr	James	Pickett	Alzheimer's society
Dr	Alasdair	Rankin	Diabetes UK
Dr	Rosa	Sancho	Alzheimer's Research UK
Mrs	Joy	Todd	Economic and Social Research Council
Dr	Mary	Travers	Biotechnology and Biological Sciences Research Council
Mrs	Kate	Aylett	Medical Research Council (MRC)
Dr	Gavin	Malloch	Medical Research Council (MRC)
Dr	Janet	Valentine	Medical Research Council (MRC)

GUESTS AND SPEAKERS			
Professor	Catherine	Law	Institute of Child Health, University College London
Dr	Tim	Wilson**	Partner, Health Industries PricewaterhouseCoopers LLP

* first day only

** only end of first day

Endnotes

1. During the NPRI the funding partner was the NISCHR which has now been incorporated into a Directorate of Health and Care Research Wales.
2. Publications from four studies could not be assessed by SRG members in time for the SRG meeting on 1 and 2 October.
3. Twelve of the award holders were interviewed regarding two projects.
4. Sustrans is a charity that works with communities, policy makers and partner organisations to promote healthier, cleaner and cheaper journeys and enjoy better, safer spaces to live in.
5. The PI shown is the name of the individual who was awarded the grant as PI. In some cases, the PI has changed subsequent to the award.
6. HCRS also includes a category called "Interventions to alter physical and biological environmental risks" which other funders may have used to code prevention research but nearly all NPRI research is coded as primary prevention. The meta-HRCS category "prevention" includes research on vaccines so this value has not been reported.
7. During the NPRI the funding partner was the NISCHR which has now been incorporated into a Directorate of Health and Care Research Wales.