# PHR Public Health Review Team - Research Plan

## **Background and Scientific Rationale**

#### Previous track record and critical mass

The School of Health and Related Research (ScHARR) is one of the largest interdisciplinary Public Health and Health Services Research groups in the UK with a reputation for delivering high quality primary and secondary research to directly inform policy and practice. ScHARR comprises a vibrant multidisciplinary group of researchers committed to improving the health of the public at local, national and international levels. The School currently employs over 300 staff and attracts over £10 million per year in external support. Our size, and well established administrative infrastructures, ensure the critical mass and robust management systems required to deliver to exacting research requirements, as demonstrated by major programmes of policy research for the Department of Health and Social Care (DHSC), including the Policy Research Unit in Economic Evaluation of Health and Care (EEPRU), and evidence synthesis and economic modelling for NICE (ScHARR-TAG). Our close collaboration with the Centre for Public Health Excellence at NICE delivered new and innovative approaches to finding, synthesising and applying the evidence base for public health guidance development. We are a partner in the NIHR School for Public Health Research and lead five main Themes in the NIHR Yorkshire & Humber Collaboration for Leadership in Applied Health Research & Care (CLAHRC). We host the NIHR Research Design Service (RDS) for Yorkshire & Humber maintaining close links to local NIHR research networks, working with the Clinical Research Network (CRN) and the national CRN lead for Public Health, who is based in our region.

#### Current links to UK public health practice and policy communities

Our understanding of the breadth and complexity of public health research and policy and the diverse and complex needs of evidence users across sectors and at local and national levels is illustrated by the diverse projects completed successfully, and the varied tailored dissemination products we produce, in partnership with policy and practice colleagues. Our involvement in major collaborative public health research programmes through NIHR CLAHRC and as a partner in the NIHR School of Public Health Research (SPHR) has enabled us to build on our excellent national, regional, local and community specific public health networks. Many local government and Public Health England (PHE) colleagues hold honorary contracts with us and we hold reciprocal contracts which facilitates joint working. We have strong regional academic and policy/practice links, infrastructure and associated networks though our CLAHRC Local Authority Research LinKs (LARKs), through the Yorkshire & Humber Public Health Network (YHPHN), and through our regional SPHR Advisory Group. We maintain specific links to partners in other local and national government policy sectors including employment (eg DWP), transport and housing (eg the ESRC-supported CaCHE Housing Knowledge Exchange Hubs). We work nationally with the UK Association of Directors of Public Health (ADPH), most recently on a comparative review of health policy across the four nations, and with PHE regionally and nationally through specific links on a wide range of policy topics. (eg modern slavery) and health promotion programmes (eq Active 10). ScHARR also has a Framework Agreement for a programme of knowledge transfer activities including evidence synthesis and economic modelling to inform policy, commissioned by PHE. Our programme of joint activities includes both formal and informal activities with senior staff on local and regional strategic groups, providing ongoing linkage between academic public health and public health policy and practice. Examples of joint review outputs with an impact on policy in different sectors include knowledge exchange events, evidence briefings across multiple public health topics and joint outputs with PHE.<sup>1,2</sup> We provide training and professional development (CPD) support for a wide range of public health practitioner colleagues through both access to our Short Courses and to a wide range of our Masters level courses and modules. Our PhD programme currently supports practitioner colleagues undertaking research degrees directly relevant to practice on public health commissioning and the implementation of public health guidance in local authority settings. We particularly value our ongoing dialogues between the research and policy/practice communities which continue to build and sustain trust, mutual understanding and respect between sectors and facilitate identifying

opportunities for engagement and collaborative working. We are active participants in the Equal North network, hosting workshops and events bringing practitioners together to discuss shared priorities in relation to addressing inequalities.

# Methodological Approach to a Public Health Evidence Review

Whilst we believe a critical requirement for a review team is to be highly flexible in order to meet the specific needs of evidence users as efficiently as possible, some specific general principles determine our approach to all our reviews:

1. Clearly identify team **membership and roles** for each member. Overall, our team combines topic and methodological expertise with detailed knowledge of UK public health and health policy.

2. Critically consider appropriate methods, taking account of time and resource constraints.

3. Work closely with **research commissioners** to ensure a shared understanding of the key review questions, proposed methods for evidence identification and synthesis and the format and nature of deliverables.

4. Work closely with **stakeholders/evidence users including members of the public and third sector organisations.** We recognise that this is critical to ensuring that all reviews are informed by those affected by the issues and those who working in practice to address them, ensuring they are of direct and immediate use to decisions makers and will genuinely impact on the health and wellbeing of our communities.

Our overall research plan combines successful working methods developed for our NIHR Health Services & Delivery Research Evidence Synthesis Centre (2015-2021) (HSDR-ESC)<sup>3</sup> with public health-specific experience of delivering reviews under our NICE Public Health Collaborating Centre, PHE and NIHR SPHR programmes.

### **Key Review Stages**

#### 1. Scoping review questions and development of review protocol

We consider public health reviews to possess characteristics which, although present in other review types, are accentuated in this context; the prominence of complex interventions, a likely lack of high quality randomised trials and reliance on mixed methods evidence, the illuminative role of theory, and the need to adopt a complex adaptive systems lens where appropriate. Our methods acknowledge this and, in particular, we are pioneering use of logic models in scoping, conceptualising and analysing complex health problems.<sup>4-6</sup> Involvement of subject experts with diverse disciplinary backgrounds will ensure the review scope and methods are appropriate to both the research question and evidence. We also propose to offer a potential test bed for the NIHR Complex Review Support Centre in developing and using innovative methods.

#### 2. Determining appropriate inclusion criteria

Initial scoping searches will be used to explore different inclusion criteria conceptually and pragmatically. For example, our current review of access for people with learning difficulties offered multiple alternatives re: definitions of primary and community care, staff delivering first contact services, types of service offered and relevant contexts and we mapped the implications of these different parameters to inform consultation to refine inclusion criteria for a focused systematic review. Public involvement and stakeholder consultation proved invaluable in identification and shaping of aspects of most importance to families and service providers. Similarly a recent policy review involved stakeholders across four countries to develop an initial consensus conceptual model, to inform inclusion criteria and to select a case study area for in-depth scrutiny.<sup>7</sup>

#### 3. Identification of evidence

Through University and ScHARR libraries, we have unrivalled access to relevant databases and websites. For each topic we will consult subject experts to target relevant subject specific databases and identify appropriate and efficient search terms. Empirical evidence on database searching suggests that an initial thorough MEDLINE based search will yield more potentially includable studies than exhaustive searches of multiple biomedical and health sources. Our preliminary strategy will

therefore be three-fold (i) a well-crafted MEDLINE search, (ii) purposive selection of disciplinespecific databases from other disciplines and (iii) Internet searching for grey literature sources targeting relevant domains.

For the full search we will develop a "map" from which the information specialist and review team will select sources judiciously tailored to each review. We use state of the art information science when choosing complementary search methods<sup>8</sup>. All search strategies will be peer-reviewed. Our recent review on Interpersonal Violence for Public Health England involves brainstorming keywords and sources, peer review of search strategies and initial piloting for yield and relevance. We frequently conduct additional searches relating to informative theory or frameworks.<sup>9</sup> Our emergent search strategy for a review of referral management used the evolving review logic model to structure an iterative search process.<sup>6</sup>

Evidence identified through systematic citation, reference and key author searches is supplemented by stakeholder suggestions of evidence not found by systematic database searches. Some reviews depend on wider systematic identification of grey literature. A review of UK diabetes prevention programmes involved a two-stage approach to grey literature searching: first, to identify, and then to search within, relevant websites. A supplementary search of primary care trust web-sites and follow-up phone calls to practitioners retrieved more detailed information on particular interventions.<sup>10</sup>

### 4. Strategy for reviewing literature

EPPI-Reviewer or Excel drop down menus will be used to identify eligibility and reasons for exclusion. Quality assessment forms a separate discrete stage once eligibility is determined and we privilege scientific risk of bias approaches over simplistic checklist-based alternatives.<sup>11-13</sup> Importantly quality assessment judgements are used to inform conclusions and recommendations.

#### 5. Data analysis

While narrative synthesis is our default (using textual, graphical and tabular means) we will draw upon diverse quantitative and qualitative synthesis methods to ensure reviews address questions of process and context for public health interventions<sup>14</sup> combining approaches through meta-analysis, network meta-analysis, framework synthesis and thematic synthesis<sup>15,16</sup> together with realist approaches.<sup>17-19</sup> Our specialist expertise in statistics, modelling and health economics is particularly relevant where there is sufficient evidence to address questions of relative and absolute cost-effectiveness from multiple perspectives<sup>20-22</sup> and for considering equity-efficiency trade-offs. Our mixed methods approaches provide additional explanatory insights<sup>1,23-27</sup> and use of systems approaches<sup>7</sup>, logic models<sup>6</sup> and pathway mapping<sup>4</sup> may all be relevant. Typically our products for NIHR review programmes involve multiple synthesis methods; reviews on postnatal depression<sup>28</sup> and on unintended pregnancy<sup>17</sup> included reviews of trial findings, qualitative synthesis, a realist review, a network meta-analysis and a review of economic studies.

### 6. Addressing inequalities

Several team members have specific expertise in relation to socioeconomic inequalities and marginalised groups – bringing insights from theory, policy and practice to bear alongside methodological developments <sup>24,29-32</sup>. Our methodologists advise other centres, in UK and Europe, on how to incorporate inequalities<sup>33</sup> or wider contextual issues within systematic reviews<sup>34</sup>. Using framework synthesis approaches for integrating quantitative and qualitative data we ensure that particular subpopulations are not overlooked, using PROGRESS-PLUS alongside contextual frameworks such as the CICI Framework for Context.<sup>35</sup> Our objective is two-fold – to craft contextually sensitive findings and recommendations for specific groups and populations (e.g. using the "marketing mix" framework to detail the distributional impacts of an intervention<sup>36</sup>). A recent mapping review conducted using PROGRESS-Plus identified research gaps across many aspects of inequality.<sup>37</sup> We anticipate that our mapping review approaches will identify evidence gaps and support the generation of research recommendations<sup>38</sup>, as well as identifying immediate policy implications where sufficient evidence is found.<sup>26,39</sup>

# **Dissemination and outputs**

### Our approach

Our overall mission is to deliver and disseminate evidence synthesis outputs that can contribute to evidence-informed public health policy and practice using approaches that acknowledge the need to address diverse interests, and, for some topics, robust challenges from evidence-users which may include advocacy and lobbying groups.

### Our review output portfolio

<u>Publications</u>: As well as the reports for the NIHR PHR journal, we will produce peer reviewed journal articles. These remain an important dissemination channel for both academic research and practice communities and ensure wide academic scrutiny and further academic use of our outputs.

<u>Conference presentations</u>: We propose to use presentations at both researcher and practitioner conferences to disseminate our findings as we find this is an effective way to reach both topic-specific and wider public health audiences (eg PHE, LGA/ADPH and Faculty of Public Health events; academic conferences and sector specific meetings (eg for housing, leisure, transport).

<u>Other written formats</u>: We produce diverse summaries of primary and secondary research findings for a wide variety of professional and public audiences, including "Evidence Briefings".<sup>40</sup> For the YH CLAHRC, we have produced research findings in creative forms including pen portraits, casebooks and toolkits. Our Knowledge Translation Casebook captured local good practice within a structured format. We have also developed "actionable tools" to facilitate knowledge transfer. For example we produced a checklist based on a review on implementation of integrated care, now being used in the NHS to inform commissioning<sup>41</sup> and co-produced on-line resources to support primary care for migrant communities<sup>42</sup>. We recently produced a widely shared "infographic" summarising the findings of our comparative review of public health policy across the four countries of the UK.<sup>7</sup>

<u>Online media:</u> We use social media to disseminate findings to target audiences, including online YouTube presentations of review findings and use of twitter to publicise findings. Outputs for young people and specific language or cultural groups who may not use mainstream media require more creative approaches and we work closely with our social media and IT expert colleagues as well as our public advisory group to ensure we make best use of these and other channels.

# **Ethics and Regulatory Approvals**

Most evidence synthesis research activity uses information already in the public domain and does not require formal ethics approval. Where we also collect primary research data from topic experts and stakeholders to inform our reviews we will obtain advice from the Chair of the ScHARR Ethics Committee/Deputy Chair of the University Ethics Committee and formal ethical approval from the ScHARR Ethics Committee when required. Ethics and governance issues arising from conflicts of interest and intellectual property issues, will be handled following existing policies developed for our NICE and NIHR evidence synthesis contracts.

# **Patient and Public Involvement**

We recognise that the public has a strong vested interest in ensuring that interventions and policies are informed by the best available evidence. We will use our existing public panels and networks of voluntary and community groups to support timely and meaningful public involvement across the review process<sup>48,49</sup> and ensure that the findings are shared with the wider community using the appropriate channels to reach all those with an interest in the evidence. We will use resources produced by CochraneACTIVE and INVOLVE, including the INVOLVE Diversity and Inclusion Working Group (of which SS is a member), to support the involvement of the public in systematic reviews as well as using other user-friendly materials designed for supporting engagement eg Health Foundation web resources. Our planned approach is described in detail in the PPI Section of the application form.

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