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Co-production scoping review: protocol

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Background

Interest in and use of co-production in healthcare services and research is growing. Previous reviews have summarised co-production approaches in use, collated outcomes and effects of co-production and focused on replicability and reporting, but none have critically reflected on how co-production in applied health research might be evolving and the implications of this for future research. We aim to conduct a scoping review to systematically map recent literature on co-production in applied health research in the UK to inform co-production practice and guide future methodological research.

Methods

Scoping review using established methods. We will created an evidence map to show the extent and nature of the literature on co-production and applied health research, based on this we described the characteristics of the articles and scope of the literature and summarised conceptualisations of co-production and how it was implemented. We will extract implications for co-production practice or future research and conduct a content analysis of this information to identify lessons for the practice of co-production and themes for future methodological research.

Results

We will report on lessons for the practice of co-production and themes for future research on co-production.

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Co-production practice and future research priorities in UK-funded applied health research: a scoping review

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Background

Despite the lack of clarity around the definition, what it means in practice and what it comprises, enthusiasm for co-production in healthcare services and research is growing. The lack of clarity is evident in the plethora of terms in use. For example, within healthcare we witness services, programmes and interventions being 'co-created', 'co-designed', 'co-evaluated' or 'co-implemented'. This can involve stakeholder and public engagement through participation or involvement in any or all steps of the applied research cycle (1,2). All are regarded as processes of co-production but the way they are enacted and operationalised varies depending on the purpose, what is being co-produced, and by whom (3,4). Some of the ambiguity in co-production also comes from its unclear relationship with Patient and Public Involvement/and Engagement (PPI/E). For some, co-production represents enhanced PPI/E, a way to improve on its shortcomings by re-engaging with the principles of power-sharing, equality and social justice, and reinforcing the democratic right of citizens to influence healthcare (3,5). For others, co-production simply represents another way of consulting the public and service users to provide instrumental inputs into health and social care services and research, demonstrating a more technocratic rationale (6). New experimental perspectives on co-production, which frame it as a generative process and a social space within which new interactions, insights and knowledge are produced, challenge conventional notions of engagement and involvement (4). However, whilst new conceptualisations and discussion can help the approach and foundational principles to further develop and evolve, and more and different forms of co-production to emerge, this also adds to the uncertainty around its use.

The UK National Institute for Health Research (NIHR) recently embraced co-production as a means of improving public involvement in research, framing it as a more collaborative and egalitarian mode of involvement with values and principles for greater equality (7). Unlike other funders of health research globally, NIHR insists on community involvement in research proposals, and it is a key criterion for funding (8). Other funders have started to encourage co-production by providing flexible funding to cover costs of user-led research design and engagement (9)and funding research into best practice for community engagement (10). In the UK context, some argue that the architecture of the new NIHR Applied Research Collaboration funding model enables authentic and visible co-production (11). Others are more cautious, arguing that co-production can only be as successful as the system allows, and that traditional research structures often fail to facilitate effective public involvement, leading to co-opting of

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the term co-production without making a tangible difference (12,13). However, there are anecdotal stories of successful collaborative working from the previous NIHR funding model, Collaborations for Leadership in Applied Health Research (CLAHRC), where co-production projects added value and led to the implementation of novel services and interventions (14). Success stories like these are not always published or reported on or described in a way that explicates how best to support researchers to co-produce applied health research or complex health interventions.

Recent systematic reviews of co-production have summarised the different co-production approaches in use, collated outcomes and effects of co-production, and some have focused specifically on replicability and reporting. Slattery conducted a rapid review of research co-design in health settings and effectiveness in the design phase of research and found that co-design is widely used but rarely reported or evaluated in detail (15). Another review examining the use of experienced based co-design in health service improvement also found inconsistent reporting and variation in use of the approach, leading the authors to argue for reporting guidelines to encourage consistency and improve the potential of the approach (13). Halvorsrud pooled effects data from co-creation projects in international health research and found moderate to small effects on a range of outcomes from different study designs and interventions, yet little evidence of longer-term effects of co-creation (16). Acknowledging the lack of evidence of the impact of co-produced or co-created interventions in healthcare settings, some authors have reviewed the evidence on outcomes and factors influencing the quality and level of co-production and co-creation (17,18). These reviews found that studies of processes and factors influencing co-production dominated and identified fewer studies evaluating clinical, service or cost outcomes.

While various aspects of co-production have been subject to more or less rigorous systematic reviews in the last 5 years, no reviews have targeted co-produced applied health research or the co-production of complex interventions (which is often the focus of applied research). Nor have previous reviews critically reflected on how forms of co-production might be evolving and the implications of this for future research. Applied health research is becoming more collaborative, with patient and public groups increasingly engaged in research projects alongside academics and practitioners, and funders are gradually mandating use of co-production principles. It is therefore timely to reflect on what has been learnt about the practice of co-production in applied health research and help forecast the direction of future research.

We will conduct a scoping review to systematically map recent literature on co-production in applied health research in the UK to inform co-production practice and guide future methodological research. The review is designed to answer the following questions:

1. What is the type and scope of literature on co-production in applied health research?
2. How is co-production conceptualised and understood?
3. How is co-production implemented in applied health research?
4. What lessons are there for co-production practice and future research, based on the current knowledge base?

Methods

We will use established scoping review methods to systematically map the nature of the evidence, summarise practice, and identify gaps in the literature on co-production in applied health research

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(19,20). We will intentionally keep the review questions broad and open to generate breadth of coverage, and once we have a sense of the volume of literature, we will determine if we need to set parameters to limit the number of studies to a manageable level.

Search strategy

We will follow a standard approach to locate published literature in scoping reviews (21). First, we will list key terms and synonyms relevant to each of the inclusion criteria (Table 1) and perform an initial high-level search of one relevant multidisciplinary database (ProQuest) using main keywords in the title. We will analyse the text words used in retrieved article titles and abstracts, then conduct a comprehensive search of five other relevant databases (CINAHL, Google Scholar, MEDLINE, Scopus, Web of Science) using all identified key words and index terms. We will conduct a separate search to ensure we identify co-production of complex health interventions as well as the broader applied health research literature. The third step will involve searching all reference lists of retrieved articles to identify additional literature. An example search strategy can be found in Additional file 1. We will downloaded all retrieved articles and manage the screening process in Mendeley.

Study selection

We will include any type of published literature (empirical research, reviews, guidelines, opinion pieces or commentaries), relevant to co-production in applied health research or complex intervention development, that reports on a range of outcomes including conceptual, methodological, impact or health. We are interested in literature that includes definitions or conceptualisations of co-production, as well as implications for future research. For the purpose of this scoping review, we will assume that co-production happens at any or all stages of the research process and will include reports using any of the plethora of terms in use including co-creation, co-design, co-production, co-implementation and co-evaluation.We will intentionally include only papers reporting applied health research conducted in the UK – to keep the focus on learning within a specific context. Following the initial searches and familiarity with the extent of the literature we will refine our inclusion criteria. Initial database searches will include papers published from 2010 onwards, when ‘co-production’ began to appear in the health literature and as a requirement of some funding schemes in the UK; we will subsequently review these and limit the date range if necessary to keep the charting and summarising steps manageable.

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A	B	C
Inclusion criteria	**Definition**	**Synonyms and possible search terms**
Participants	Any stakeholders involved in applied health research (e.g. researchers, patients, public)	Health research, applied health research[1], health, healthcare, health care, complex health intervention research[2]
Intervention	Co-production approach or methodology	Co-production, co-produc*, co-design, co-creation, co-creat*, co-evaluation, co-evaluat*
Context	UK literature: research conducted in or relevant to UK context	Limit=UK
Outcomes	Definitions, typologies or conceptualisation of co-production Key outcomes (conceptual, methodological, impact, health, experiential)Research implications	
Type of literature	Any type of published literature including systematic reviews, literature reviews, empirical research (evaluations of co-production or co-produced intervention research), guidelines, opinion or comment pieces	
Language	English language only	Limit= English language
Date limits	From 2010 onwards, when 'co-production' started to appear in the health literature	Limit to year= "2010-2020"Subsequently limited to 2018-2020 given the large number of hits from initial searches

Table 1. Scoping review inclusion criteria

One author (HS) will apply the inclusion criteria to all titles and abstracts retrieved in the searching. After excluding articles that do not meet the criteria, we will retrieve full text copies of all remaining articles. One author will screen these for inclusion (HS), and another author (LB) will independently screen 25% of articles; discrepancies in include or exclude decisions were resolved by discussion.

Data extraction

We will use a MS Excel sheet to chart the characteristics and record key information from articles included in the review (e.g. author, year of publication, study design, health speciality, aim, intervention type, outcomes reported, implications for practice and research). The items and information to be collected from each article will be piloted by two team members, and adjustments made to ensure it is fit for purpose and standard information can be extracted in the same way for each article. Charting will be completed by three authors (CG, IH, AH) and an independent check of 25% of the articles will be done by another author (HS).

Summarising and reporting the findings

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We will use a descriptive-analytical method using the charted information as an overall framework for reporting across all included articles (19). The resulting chart or evidence map will show the extent and nature of the literature on co-production and applied health research. Based on this map we will develop a narrative summary, first describing the characteristics of the articles and scope of the literature (type, study design, health speciality, key outcomes reported), followed by a summary of conceptualisations of co-production and how co-production was implemented, as described in the articles. We will extract from the discussion section of each study any mention of implications for co-production practice or future research and conduct a content analysis of this information to identify lessons for the practice of co-production and themes for future methodological research. Reporting of the findings will follow the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) format(22).

[1]Applied health research aims to address the immediate issues facing the health and social care system, bringing research evidence into practice and influencing policy.
[2]Interventions with multiple behavioural, technological and organisational interacting components and non-linear causal pathways and components that act independently or interdependently.

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