

ARTICLE

# Developing interventions through partnership with community members

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## Abstract

Interventions are increasingly being co-produced in partnership with people from the communities who will use them. This can help to ensure interventions are appropriate for and valued by these communities. This article describes how our research team has implemented the methods and tools of the widely used Person-Based Approach to integrate co-production into the heart of our intervention development. We describe a series of case studies and consider how traditional engagement approaches may be complemented with approaches that better suit the needs and preferences of those from underserved communities. We consider the benefits and limitations of each co-production approach and propose a range of tools (e.g. table of changes, planning table, guiding principles) to support co-production. We conclude by highlighting that collaborating with intervention users requires flexibility in engagement efforts to facilitate meaningful partnerships at all stages of intervention development. We also advocate working with community partners to agree on an approach that supports both research requirements and reflects their needs and preferences.

**Key words:** Coproduction, Community engagement, Person-based approach, Underserved communities

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## Introduction

Interventions are increasingly being co-produced in partnership with people from the communities who will use them, to ensure interventions are appropriate for, and valued by, these communities. There are many approaches to health intervention co-production that use different methods and involve community members in the decision-making process to different extents (Smith et al., 2022). For example, some approaches take a principles-driven perspective, focusing on challenging existing power imbalances to ensure that power and responsibility are shared throughout all stages of research and development (National Institute for Health Research, 2024; Paylor and McKeivitt, 2019). While other approaches partner with community members using consultation methods (e.g. interviews, group workshops) to understand their views and experiences to inform specific aspects of intervention development (e.g. creating tools or websites). This article describes how our research team has implemented the methods and tools of the widely used Person-Based Approach (Holt et al., 2025; Yardley et al., 2015) to integrate co-production into the heart of our intervention development. We describe a series of case studies and consider how traditional engagement approaches may be complemented with approaches that better suit the needs and preferences of those from underserved communities.

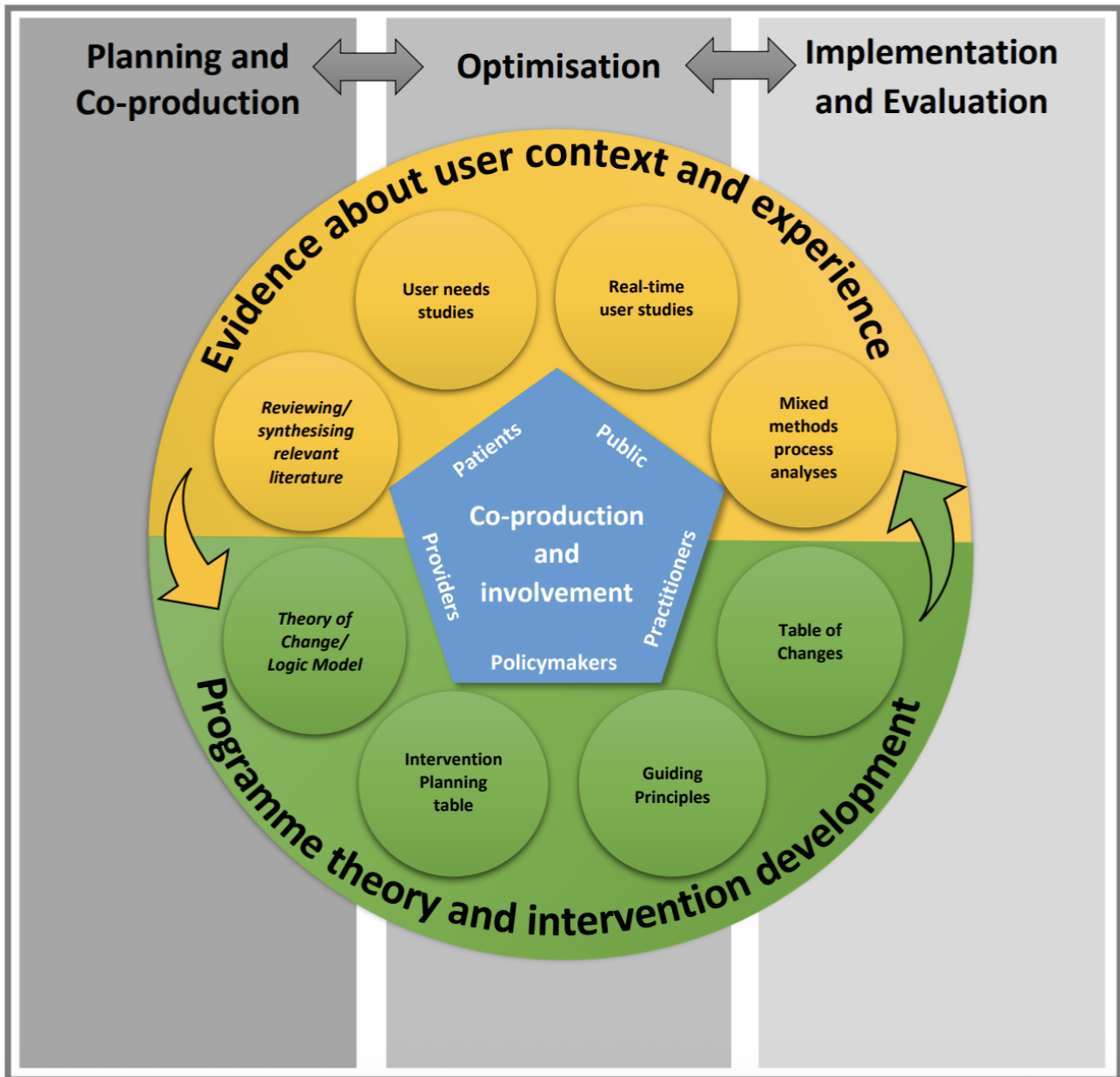
## Using the Person-Based Approach for co-production

The Person-Based Approach (PBA, <http://www.personbasedapproach.org/>) is a framework for developing complex health interventions that can be used in partnership with members of the community to ensure interventions are inclusive, engaging, and effective [Figure 1, from [https://personbasedapproach.org/pba\\_diagram.html](https://personbasedapproach.org/pba_diagram.html)]. Co-production is core to the PBA, as its focus is on understanding and accommodating the perspectives of those affected by the intervention. The PBA often combines co-production with in-depth qualitative research with a diverse range of people (Muller et al., 2019).

Qualitative studies are studies ‘of’ people. Activities are pre-determined by the research team (including public contributors), strongly governed by ethical procedures, and lead to controlled, standardised and predictable outcomes. PPI and co-production is carried out *with* people and the process is more flexible. Activities and discussion topics are co-produced, and as a result, outcomes are less predictable. Ethical and governance procedures are less regulated, which means consent procedures are not required and inclusive and agile methods of engagement may be permitted. Generally, qualitative research participants are given incentives, such as gift vouchers, to take part. Whereas public contributors are often given an hourly payment as a thank you for their time, skills and expertise and/or reimbursement for any expenses incurred from their involvement, such as travel or remote/home working costs. In the UK, the latter is typically in line with National Institute for Health Research rates (<https://www.nihr.ac.uk/payment-guidance-researchers-and-professionals>).

The below case studies demonstrate how co-production methods should be used flexibly, depending on the development stage, available resources, and specific project needs, and the needs and preferences of the specific groups and communities targeted by

the intervention. They also highlight some of the PBA tools that aim to ensure the perspectives of our target communities are integrated into interventions.



**Fig. 1.** Overview of the Person-Based Approach to intervention development, including tools and methods that may be used across the development process.

### A citizen science approach

The UK's National Institute for Health Research (2024) define co-production as an “approach in which researchers, practitioners and the public work together, sharing power and responsibility from the start to the end of the project”. Citizen science approaches, whereby research and interventions are co-produced in equal partnership with communities, offer one method of achieving these goals. For example, our RAPID Eczema Trials programme (Fong et al., 2025; Howells et al., 2024) (<https://rapideczematrials.org/>) has built an online community of over 1,000 citizen scientists (people with eczema and carers), who collaborate to prioritise research areas, define research questions, develop interventions, design clinical trials, and disseminate research findings in a timely manner. We use a diverse range of methods to get input from the wider community, including regular surveys and brief polls, online drop-in clinics, and interviews. We invite citizen science community volunteers to join smaller co-production groups who work together with clinicians and researchers to design specific aspects of the research (e.g. prioritisation, intervention or trial development).

The PBA as our intervention development framework naturally aligns with citizen science as both approaches place those the research is for (in our case, people living with eczema) at the centre and provide tools to guide co-production. For example, in one intervention we compared the impact of bathing daily compared to bathing once a week on eczema severity (Fong et al., 2025).

We worked with our co-production group to develop guiding principles to highlight the key issues that may affect intervention engagement. A key guiding principle was that people in the weekly bathing group may worry about their appearance or feel unclean when bathing once a week. We addressed this by incorporating reassurance that you can still wash your face and body using a flannel/sponge in the sink between showers or baths, and we included instructions for washing your hair over a bath or sink. While this approach to co-production is expensive and often time-consuming, over time it can build confidence and an empowered community and streamline processes that can lead to efficiencies in the design and delivery of interventions and trials, ultimately, enhancing the lives of people with eczema.

## Community members as part of the research team

Despite their value added, citizen sciences approaches may not be feasible for projects with limited time and resources. In such circumstances, it may be more appropriate to engage community members as core members of the research team, involving them in key decisions at every stage, from identifying research or intervention priorities to evaluation and implementation of the final intervention (Skivington et al., 2021). Such an approach was taken in our iSupport-PD study (<https://fundingawards.nihr.ac.uk/award/NIHR204259>) that aimed to adapt a globally available digital intervention for dementia carers to meet the needs of a different population - carers of people with Parkinson's and cognitive impairment. For this study, a carer was a co-applicant on the research grant, co-developing the intervention development plan with the research team, and recruiting and leading an advisory group of five carers and a person with Parkinson's. This advisory group was central to key intervention development decisions, including how the original intervention content should be adapted for this new population, identifying suitable resources that were included in the website, and deciding the intervention name, website design, and lay terminology to be used throughout (e.g. "care partner" and "thinking and memory changes"). However, we were conscious that this group were highly motivated and experienced, so may not represent the views of carers from varied backgrounds. Therefore, we complemented their involvement with in-depth qualitative research with diverse carers who had different backgrounds to those on the advisory group (e.g. non-spouse, younger carers, those new to the caring role). We interviewed them about their caring experiences and support needs and conducted think aloud interviews to obtain feedback on intervention content and design. Our carer advisory group supported this work by championing the research at community groups to facilitate recruitment, identifying additional routes for recruitment, and participating in pilot interviews to provide feedback on the interview questions and intervention. Feedback from our advisory group and qualitative research participants were both integrated into the PBA table of changes (Bradbury et al., 2018). The table of changes is a table within which positive and negative comments about an intervention are collated and used to inform decisions regarding possible changes ([https://personbasedapproach.org/table\\_of\\_changes.html](https://personbasedapproach.org/table_of_changes.html)). It provides a systematic method for collecting feedback from community members; recording, identifying and prioritising changes to the intervention; and documenting how community members contribute to the agreed decisions (Morton et al., 2021).

The advantage of this co-production approach is that it ensures continuity throughout development, ensuring that community members have oversight and ownership over the whole development process. However, it is heavily reliant on the ongoing engagement of highly motivated individuals who can commit to long-term development timelines. Some groups may find such a commitment challenging, and public contributor panels and in-depth qualitative research may be off-putting for those less likely to engage with research. For such individuals, more flexible and agile methods of co-production are required.

## Flexible and agile methods of co-production for engaging underserved communities

Despite the importance of giving everyone equal opportunity to take part in co-production activities, regardless of race, age, gender, or ethnicity, inclusion in research of some groups of individuals remains low. Individuals from such groups are considered to be "underserved" – meaning they are not represented in research, and less likely than the general population to engage with healthcare interventions (National Institute for Health Research, 2020). In a recent qualitative study with young people from disadvantaged backgrounds (Denford et al., 2024), we explored barriers to engagement in public health research and possible ways to support involvement when doing co-production. We spoke to young people from very disadvantaged backgrounds and community leaders/service providers who work with them. Whilst this started as a traditional interview study, participant feedback highlighted that one-to-one interviews were not the preferred approach for engagement. Young people in the study disliked talking on the phone and were often unable to meet in person. As a result, we gave participants the opportunity to take part via social media (WhatsApp, Facebook Messenger) and text message. Participants could respond to questions in their own time through photos, emojis, voice notes or written text. Using this approach, participants discussed a number of barriers to research involvement. Prejudice and discrimination experienced by young people from disadvantaged backgrounds led to substantial mistrust of educational and governmental establishments. This combined with rigid and unfamiliar research practices further reduced motivation among young people to engage with research teams. Young people recommended ways to support their involvement; including making opportunities more accessible to those with little or no understanding of research; adapting research governance so that recruitment methods are less intimidating and unwelcoming; incorporating flexibility in research procedures to better suit their needs, preferences and communication styles; understanding and acknowledging the challenges faced by young people; and ensuring young people benefit from sharing their views with research teams.

The DISCA programme (<https://fundingawards.nihr.ac.uk/award/NIHR203684>) provides one example of what these flexible approaches may look like in practice. DISCA aims to develop a digital sleep intervention for parents/carers of children with ADHD and chronic insomnia. We developed a good understanding of the experiences of parents/carers through qualitative research and we planned to conduct think aloud interviews to gain feedback on an intervention prototype. However, it was also important to get input on early design decisions during the development process. Working with an external web developer, timelines for making decisions were often tight, meaning we did not have the time to run in-depth consultation activities. Furthermore, this population was generally time-poor, and many individuals had ADHD themselves, meaning that prolonged engagement was not feasible or preferable. To overcome this, we recruited a 'rapid response' advisory group of parents/carers of children with ADHD who were sent requests for input into the digital intervention design via email or brief surveys. Individuals shared their feedback

and preferences regarding the voice-over style for educational videos, advice provided in video scripts, and look and functionality of the website design features (e.g. interactive sleep plan). This rapid approach allowed us to use engagement methods that better suited the needs of busy parents/carers, while ensuring we gained timely feedback on more detailed aspects of the intervention.

Another example comes from the “Sleep Well” study (Bennett et al., 2024) that illustrates how we were able to integrate two approaches to co-production to maximise both scope and detail of involvement. Young people recruited through the McPin foundation took part in intensive workshops that played an important role in co-production by identifying key elements needed to make the intervention engaging, which we then incorporated (i.e. gamification by allowing users to collect stars). They tried out the intervention and recorded their positive experiences for inclusion in the app to encourage other young people to try it. However, these young people were highly literate and health literate and so we needed to use other methods to engage with young people from low-income areas, who only wanted to provide brief online input through surveys and occasionally one-to-one interviews, including think aloud interviews. Although these contributors were less deeply engaged their input was vital as it identified that whereas the McPin young people wanted more in-depth scientific content, that was off-putting to the young people from low-income areas, so was not implemented. It was also important that their input was obtained as public contributors as this provided them a less formal and more flexible route for providing feedback, without the barrier of informed consent which our previous work with young people (described above) indicates would have made them unlikely to engage.

## Conclusion

This paper has outlined one approach to intervention development through co-production and presented case studies to demonstrate the variety of approaches and ways of working with groups and communities within the PBA. This can help create effective and engaging interventions by facilitating greater diversity in the voices of those who are able to support the development of interventions. Intensive approaches to co-production, such as that used within the citizen science project, can lead to empowered communities, streamlined research procedures and optimal interventions. However, it is time consuming, expensive, and not always practical or desired by groups and communities. More rapid and flexible approaches to co-production can overcome some of these issues but may not give research teams the depth of insight that comes with longer, more in-depth engagement with community groups. Throughout this paper we suggest that collaborating with intervention users requires flexibility in engagement efforts to facilitate meaningful partnerships at all stages of intervention development and advocate working with community partners to agree an approach that supports both research requirements and reflects their needs and preferences.

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