Co-development of health interventions – the what, the why, and the how

Dr Paula Watson, Benjamin Buckley, Daisy Bradbury, Abigail Millard

Physical Activity Exchange, Research Institute for Sport and Exercise Sciences
Liverpool John Moores University

#UKSBM2017
#coproduction
What is co-production?
The origins of co-production

Citizen activities may affect both the output and outcomes of public agencies. Citizens in some neighborhoods may lock their doors, while those in other areas do not. In this way citizens’ activities in the production of an output, the arrest, become coproducers with police through the contribution of their activities. The activities of citizens...
‘the involvement of public service users in any of the design, management, delivery and/or evaluation of public services’

(Osborne et al., 2016, Public Manag Rev, 18; p.640)

‘the engagement of multiple stakeholders in any of the design, management, delivery and/or evaluation of public services’
Commissioner

Public health priorities

Evidence, theory

Academic

Co-production

Service user

Needs, facilitators, barriers

“Craft knowledge”

Provider
What co-production isn’t

• Ticking the PPI box on a grant application
• Collecting qualitative feedback from RCT participants
• Putting academic research priorities over and above public health
Why is co-production important?
The case of physical activity (PA)

“Despite the advent of exercise guidelines, there is concern that they have not yet prompted changes in behaviour” (p.1393)

“The RCT approach requires very tight control over the intervention…very often it becomes merely an artefact of the real-world intervention” (p.1398)

1000s of trials showing physical activity and exercise are good for us

Yet we know little about how to implement these in practice

Dugdill et al., 2005, Ergonomics, 1390-1410
Which raises the question – what is the primary objective of health intervention research?
The case of physical activity (PA)

“[Evaluation research]…must, above all, produce data and information which are meaningful and appropriate for the purposes of effecting change within that programme” (p.1398)

We urgently need methodologies to bridge the research-practice gulf

Not an either-or scenario

Dugdill et al., 2005, *Ergonomics*, 1390-1410
“Before undertaking a substantial evaluation you should first develop the intervention to the point where it can reasonably be expected to have a worthwhile effect.”

Medical Research Council Complex Intervention Guidance (2008), p.9

- Co-production as a long-term process (needs analysis, co-development, co-delivery, co-evaluation)
  - An ongoing “reciprocal feedback loop” (Ogilvie et al., 2009)
Proportion of children reducing BMI z-score over 7 years of delivery (GOALS)

- 2006-2007: 45.5%
- 2007-2008: 62.5%
- 2008-2009: 80%
- 2011-2013: 91.4%

How is co-production achieved?
Methods

• Interactive workshops, creative methods, focus groups, online questionnaires

• Traditional sequential approaches or iterative development

• Consideration of research team roles – participants, researchers, facilitators?
The softer skills...

- Patience, perseverance, flexibility
- Tolerant of “messiness” (Rycroft-Malone et al., 2016)
- Supporting autonomy, competence, relatedness (Ryan & Deci, 2000)
- Genuine openness for two-way learning
- “From fixer to facilitator – going round in circles promotes change!” (Helen Hunnisett, 2011, International Practice Development Journal, 1, article 9)
‘Making a Move in Exercise Referral’
Co-development of an evidence-based PA referral scheme

Benjamin Buckley
Liverpool John Moores University

Co-Authors
Thijssen, D. H. J., Murphy, R. C., Graves, L. E. F., Whyte, G., Gillison, F., Wilson, P. M., Crone, D., & Watson, P. M.
“4 out of 10 adults aged 40 to 60 in England walk less than 10 minutes continuously each month at a brisk pace.”

PHE, 2017
Nothing to Something

Ekelund, Lancet, 2016
UK Exercise Referral
“A public health panacea for PA promotion”?

Dugdill et al., 2005; Pavey et al., 2011
Misleading evidence

1990s
ER introduced in the UK

2001
NICE National Institute for Health and Care Excellence

1990s
ER introduced in the UK

2001
NICE National Institute for Health and Care Excellence

2006 – PH2
ER schemes only recommended as part of a “properly designed research study”

2014 – PH54
ER schemes should only be commissioned if include behaviour change support and collect evaluation data

Poor assessment of ER potential

(Beck et al., 2016)
“Before undertaking a substantial evaluation you should first develop the intervention to the point where it can reasonably be expected to have a worthwhile effect.”

Medical Research Council Complex Intervention Guidance (2008), p.9
Phase 1: Co-development

1. Needs Analysis
2. Eligibility & Referral
3. Intervention Framework (Phase 1)
4. Intervention Framework (Phase 2) & Evaluation
5. Follow-Up

Intervention Framework

Local Stakeholders

Evaluation
Watson et al., In Prep

Stakeholder knowledge
Scientific evidence
Behaviour change theory
Participatory Research:
ERSs should go beyond “advice giving, recommending exercise, or offering patients vouchers to attend exercise facilities” (NQAF, 2001)

16 years later!
= 12-week exercise prescription

“\textit{A person-centred approach to improve wellbeing and QOL through PA}”
- Meeting 1

Findings & Discussion
Reported a “higher duty of care” and emphasised a legal requirement for anyone prescribing PA (to patients) to have an exercise referral qualification.

- Fitness Centre Area Manager

“We’ve got to give responsibility to the patient... Are you going to say to someone, ‘you can't run for the bus once you leave here?’; clearly they can, it's up to them.”

– GP and Public Health Commissioner
PA recommendations for clinical populations?

NQAF, 2001; Thornton et al., 2016
“It’s easy to understand why this level of support would be beneficial for patients”
- Public Health Commissioner

“This is time and resource intensive”
- Public Health Commissioner
Co-Developed Intervention

Referral from Health Professional

Week 0 Induction

Week 4 Consultation

Week 8 Consultation

Week 12 Consultation

Week 18 Follow-Up

Additional Support (optional)

Health Trainer Service

58% ER participants recalled seeing instructor at induction only

Watson et al. in prep

Behaviour Change Techniques

12-Week tailored PA support
Phase 2: Pilot

Referral from Health Professional

Week 0 Induction

Labor-based testing
- Vascular ultrasound
- Blood biomarkers
- VO₂ max
- MVPA: Accelerometry

Patient recruited

Feasibility and Piloting
- Testing procedures
- Inform evaluation phase

Week 12 Consultation

Semi-structured interviews
- Patients (week 12)
- Staff (week 6 & 12)

Week 18 Follow-Up

Process evaluation
- IPAQ
- WEMWBS
- Body Mass

- Fidelity/Adherence

Lifestyle & Psychosocial Qs
- IPAQ
- WEMWBS
- Body Mass
Facilitators & Challenges of a Participatory Approach

- Use of a ‘needs analysis’ & smaller sub-groups
- Multidisciplinary debate & problem solving
- Use of an independent facilitator
- Language: open questions & autonomy supportive
- Translating evidence to practice
- Varied stakeholder attendance
- Stakeholder perceptions of researcher objectives
Conclusions & Moving Forward

- Participatory research = ↑ intervention context-sensitivity
- MRC guidance = ↑ implementation success & effectiveness

↑ Clinical & Cost Effectiveness?
Further presentations related to this project, Thursday 14th December:

Dr Paula Watson – Reflections on training exercise referral practitioners
Parallel session C – “Delivery & fidelity”, 10:50-12:20

Benjamin Buckley – Feasibility study results
Parallel session D – “Physical activity”, 14:30-15:30

The Team:
Buckley, B. J. R., Thijssen, D. H. J., Murphy, R.C., Graves, L. E. F.,
Whyte, G., Gillison, F., Wilson, P. M., Crone, D., & Watson, P. M.
Co-development with health professionals: an online weight-related communication training resource

Daisy Bradbury

Dr. Lorna Porcellato, Dr. Hannah Timpson, Gill Turner, Dr. Anna Chisholm, Dr. Shirley Goodhew, Dr. Ruth Young, Dr. Nabil Isaac & Dr. Paula Watson

1Physical Activity Exchange, Research Institute for Sport and Exercise Sciences, Liverpool John Moores University, UK
2Centre for Public Health, Liverpool John Moores University, UK
3Faculty of Education, Health and Community, Liverpool John Moores University, UK
4Psychological Sciences, University of Liverpool, UK
5Blackburn with Darwen Borough Council, UK
6Cornerstone Practice and Health Care, Blackburn with Darwen, UK
This study aimed to co-develop a training tool for multi-agency professionals to equip them with the confidence, knowledge and skills to promote healthy weight in pre-school age children.
Who was invited?

- Health Visiting Team: Health Visitors and Community Nursery Nurses
- Academic Experts
- CCG Representatives
- GPs
- Team Leaders
- Public Health Practitioners
- Children's Centre Staff
- Practice Nurses
- Paediatricians
- Nutritionists
- Pre-school Parents
Who Attended?

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Participants (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Visiting Team</td>
<td>11</td>
</tr>
<tr>
<td>Children’s Centre Staff</td>
<td>3</td>
</tr>
<tr>
<td>GP/CCG</td>
<td>1</td>
</tr>
<tr>
<td>Pre-School Parents</td>
<td>1</td>
</tr>
<tr>
<td>Public Health Managers</td>
<td>3</td>
</tr>
<tr>
<td>Nutritionist</td>
<td>1</td>
</tr>
<tr>
<td>Academics</td>
<td>2</td>
</tr>
</tbody>
</table>
Participatory workshops

• What was the aim of the workshops?

➢ Aim: To develop an intervention to help frontline practitioners manage pre-school (2-4 years) weight

• What did the workshops look like?

➢ 4 workshops
➢ attended by a user group of multidisciplinary stakeholders
➢ Interactive, group discussions, group feedback
Participatory Workshops

➢ Workshop 1

<table>
<thead>
<tr>
<th>Workshop 1</th>
<th>Aims</th>
<th>Group activity examples</th>
</tr>
</thead>
</table>
| Introductory workshop           | ➢ To agree an intervention aim and which professionals it should be designed for  
| (November 2016)                 | ➢ To discuss the skills that are needed to manage preschool weight and which of these the intervention should cover  
|                                 | ➢ What should the intervention cover?                                  | ➢ Group discussions:  
|                                 |                                                                      | ➢ What do you currently do to support families with children of unhealthy weight?  
|                                 |                                                                      | ➢ In an ideal world what more could you do?  
|                                 |                                                                      | ➢ What skills are needed?  
|                                 |                                                                      | ➢ Which topics do you feel you need training, updates or refreshers? |
### Workshop 2

<table>
<thead>
<tr>
<th>Workshop 2</th>
<th>Aims</th>
<th>Group activity examples</th>
</tr>
</thead>
</table>
| Intervention development (1) (November 2016) | ➢ To decide on the intervention format  
➢ Explore training website for school nurses, (CHM) would this, or an adaptation be relevant?  
➢ Discuss the skills that are needed to manage pre-school weight  
➢ To decide on the topics should the intervention cover? | Group discussions:  
➢ How do you feel about using CHM as a starting point for the intervention?  
➢ What do you like and what don’t you like? (consider, pre- and post-tests, engagement, videos)  
Group activities:  
➢ Revisiting skills discussed – on post its rank what you feel is most important for the intervention cover? |
## Workshop 3

<table>
<thead>
<tr>
<th>Workshop 3</th>
<th>Aims</th>
<th>Group activity examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intervention development (2) (January 2017)</td>
<td>➢ To discuss and review the learning outcomes and activities of the online modules</td>
<td></td>
</tr>
<tr>
<td></td>
<td>➢ To establish the length of time you full modules should take to complete</td>
<td></td>
</tr>
</tbody>
</table>
|                                                 | ➢ Observe a “parent – practitioner” discussion, would this be appropriate as a module video? | **Group activities:**  
|                                                 |                                                                        | ➢ Participants were provided with worksheets outlining all of the module aims and objectives and proposed activities for each module  |
|                                                 |                                                                        | **Group discussions:**  
|                                                 |                                                                        | ➢ Provide feedback on the module outlines  |
Workbook

Module: Unhealthy weight at pre-school age

Module aims:
- To equip practitioners with key evidence related to unhealthy weight in childhood

Learning Objectives:
- Identify the risk factors of unhealthy weight
- Identify the impact of overnutrition on a pre-school child’s health (both short and long term)
- Identify the impact of undernutrition on a pre-school child’s health (both short and long term)
- Feel confident in discussing this topic with parents and family

Questions:
1. Are you happy with the module aims and objectives?

2. If not, what would you change?

3. Is there anything else you would like to see addressed that is not covered by the objectives above?

Module contents

QUIZ
1. What do you think of the quiz?

2. Do you have any other ideas for activities to include in this module?

Information sources
- Links to websites that provide detailed information on unhealthy weight, e.g., diabetes risk, risks of obesity
### Workshop 4

<table>
<thead>
<tr>
<th>Workshop 4</th>
<th>Aims</th>
<th>Group activity examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feedback workshop (August 2017)</td>
<td>➢ Feedback on the draft version of the website</td>
<td>Group discussions:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>➢ What aspects of the intervention do you think worked well?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>➢ What aspects do you think need improving?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Group activities:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>➢ In groups of 2-3 complete the feedback sheet</td>
</tr>
</tbody>
</table>
Online intervention

Self-Determination Theory

Communicating with Parents about Lifestyle Change
Unhealthy Weight at Pre-School age
Nutrition
Culture

Behaviour Change Techniques
Identifying Unhealthy Weight
Physical Activity and Sedentary Behaviour
Roles and Responsibilities
Promoting healthy weight
This website is currently under construction so maybe subject to change

Promoting healthy weight in pre-school children

This resource aims to equip professionals with the knowledge and skills to manage both over and underweight in pre-school children (aged 2-4 years). The focus is on promoting healthy weight by supporting families in making positive health behaviour changes (physical activity and diet).

This online resource has been co-developed as part of a PhD research project by a team of multi-disciplinary professionals from Liverpool John Moores University and Blackburn with Darwen Council.
Interested in what’s going on in these consultations? In the videos below, Dr. B. discusses key components of each consultation. What support or advice do you think would help you feel more comfortable in these situations?

Activity - reflecting on our own practice

Now, you have watched the different consultation styles. Look for the challenges in relation to your own practice. What did you notice? What would you do next?
Example Action Plan

My action plan this week is to: replace my child’s chocolate with fruit at lunch time

<table>
<thead>
<tr>
<th>Day</th>
<th>Action (what, where, when?)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>Have fruit and plain yogurt with lunch</td>
</tr>
<tr>
<td>Tuesday</td>
<td></td>
</tr>
<tr>
<td>Wednesday</td>
<td>Chop strawberries and apple to have after lunch</td>
</tr>
<tr>
<td>Thursday</td>
<td>Take a fruit smoothie in lunch box to nursery</td>
</tr>
<tr>
<td>Friday</td>
<td></td>
</tr>
<tr>
<td>Saturday</td>
<td></td>
</tr>
<tr>
<td>Sunday</td>
<td>Make a fruit salad for Sunday lunch pudding</td>
</tr>
</tbody>
</table>
Challenges

➢ Practice Nurses perceptions of their role Vs Multi-disciplinary perceptions

➢ Online Vs face to face

➢ Participant perceptions of training needs

➢ Questioning the value of the project
Starting January 2018

Baseline

Measures: Scenarios, SDT constructs, Barriers Questionnaire

GPs and Practice nurses

Health Visiting Team

Children’s Centres

3 month follow-up

Measures: Scenarios, SDT constructs, Barriers Questionnaire, Focus groups
Thank you

Any Questions?

D.Bradbury@2015.ljmu.ac.uk
Engaging key stakeholders in the development and piloting of a Move More, Sit Less workplace intervention

Postgraduate researchers: Abigail Millard, Madeleine Cochrane, David Gavin

Supervisors: Dr Lee Graves, Dr Becky Murphy, Dr Sam Shepherd

Advisors: A/Prof Genevieve Healy, Dr Charlotte Edwardson, Prof David Dunstan
“Any waking behaviour characterized by an energy expenditure ≤1.5 metabolic equivalents while in a sitting, reclining or lying posture”
(Trembley et al., 2017, p.9)
How much physical activity should you do?

Adults (19 to 64) should aim for at least 150 minutes of moderate intensity activity, in bouts of 10 minutes or more, each week.

All adults should undertake muscle strengthening activity, such as:
- Exercising with weights
- Yoga
- Or carrying heavy shopping

This can also be achieved by 75 minutes of vigorous activity across the week or a mixture of moderate and vigorous.

Minimise the amount of time spent sedentary (sitting) for extended periods.
Move more

Increase light-moderate physical activity per day.

Frequently break up prolonged periods of sitting.

Sit less

Reduce the total amount of time spent sitting at work by 2-4 hours.

(Buckley, Hedge et al. 2015)
Sedentary behaviour in the workplace

• 2/3 of waking hours at work (Thorp, Kingwell et al. 2014)

• 90% of time seated in contact centres (Toomingas et al., 2015)

• 4% of the UK population are employed in contact centres (Contact Babel Report, 2015)
Characterised by high call volumes

Repetitive work

Low autonomy over working tasks
1. Development

Study 1: Formative phase.

Aim: To explore the factors influencing call agents moving more and sitting less at work

(Craig, Dieppe et al. 2008)

2. Pilot and feasibility

3. Evaluation

4. Implementation

The MRC Framework:
Methods

Four contact centres based in the North West of England

Semi-structured interviews and focus groups (Kitzinger 1995)

Thematic analysis guided by the socio-ecological model (Bronfenbrenner 1977)
Results

43 Participants (Female 52%)
Mean age 39.0 ± 13.2 years

Predominately White British, single, educated to a tertiary level and full-time employees

All participants reported their daily working tasks were mainly seated
"You can't make a culture change without your leaders, but you also can’t make a culture change without investment, and you don't get investment unless you can prove the benefit" P26 (ST3)

“We take calls, so obviously you've got the customer's account in front of you on a PC, you've got a headset which you're connected to a phone, so you can’t really go far.” P28 (AG3)

“So if all team managers [...] led by example; so if they're all acting a certain way, it becomes the culture within the contact centre and then subconsciously you are going to be more active because you’re not realising it.” P35 (AG4)

“[I would] just like more information on what the benefits are of doing it [breaking sitting time], be that health-wise or be that job-wise.” P1 (TL1)
✓ Team leaders and senior team members contributed increased organisational awareness in addition to agent perspectives

✓ Integrating active working strategies into daily working practices may enhance sustainability of future interventions.
1. Development
Study 1: Formative phase.

2. Pilot and feasibility

3. Evaluation

4. Implementation

The MRC Framework:

Study 2:
8-week non-randomised multi-level pilot and feasibility trial.

(Craig, Dieppe et al. 2008)
✓ To help refine and justify the design of a subsequent full-scale cRCT, (Whitehead et al., 2014).

Emphasis on process evaluation over evaluation of effectiveness.

✓ Explore whether the intervention components work effectively both independently and interdependently (Billingham et al, 2013; Thabane et al., 2009)
Study design

Pre-measures

1. 2. 3. 4. 5. 6. 7. 8.

Post-measures

+Process evaluation

Team leader
The behaviour change wheel

COM-B System

Michie et al., (2011)
Data collection

- ActivPAL
- Blood pressure
- Fasting blood samples
- Anthropometrics
- Questionnaires
Process evaluation

- Semi-structured interviews and focus groups (Kitzinger 1995)
- Agents
- Team leaders
- Movement
- Likert-type scales to measure attitudes (Boone 2012)
1. Recruitment

Team leaders expressed interest and assessed for eligibility (*n*=7)
(Recruitment rate = 35% of total team leaders)

- Did not meet eligibility criteria (*n*=2)
- Changed job roles (*n*=1)

Team leaders eligible (*n*=4)
(Recruitment rate = 20% of total team leaders)

- Uncontrollable organisational changes
  - Teams disbanded (*n*=2)
  - Additional team leaders expressed interest and assessed for eligibility (*n*=2)

Team leaders consented (*n*=6)
(Recruitment rate = 30% of total team leaders)

- Call agents sent recruitment email (*n*=84)

Call agents expressed interest and assessed for eligibility (*n*=31)
(Recruitment rate = 37% of available call agents)

- Did not meet eligibility criteria (*n*=6)

Call agents eligible (*n*=25)
(Recruitment rate = 30% of available call agents)
1. Recruitment

“I think a lot of people would have looked at it [recruitment email] and thought more work if I being honest with you” (T3)

Perceived burden

“I think personally, you should just come in to team meetings and explain what you are, what you’re after, and then sign people up there and then” (P20)

Agent engagement

Future recruitment strategy

- Remove team leader recruitment phase
- Identify organisational stakeholders
- Engage agents in team briefings
2. Data collection

<table>
<thead>
<tr>
<th>It was feasible to complete the following assessments:</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Body stature measurements</td>
<td>100%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>b) Blood pressure</td>
<td>100%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>c) Surveys</td>
<td>100%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>d) 7-day accelerometer</td>
<td>82%</td>
<td>9%</td>
<td>-</td>
<td>9%</td>
<td>-</td>
</tr>
<tr>
<td>e) I felt supported by my organisation to complete the assessment protocol within work hours</td>
<td>91%</td>
<td>9%</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

“On the second time I didn’t fast no, but I would have been able to, I just completely forgot about the session so I’d had a coffee in the morning, and a croissant” (P10)
### 3. Intervention delivery

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Very effective</th>
<th>Somewhat effective</th>
<th>Neutral</th>
<th>Somewhat ineffective</th>
<th>Very ineffective</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Height adjustable workstation</td>
<td>73%</td>
<td>9%</td>
<td>-</td>
<td>-</td>
<td>18%</td>
</tr>
<tr>
<td>b) The movement champion</td>
<td>36%</td>
<td>27%</td>
<td>27%</td>
<td>9%</td>
<td>-</td>
</tr>
<tr>
<td>c) Weekly team leader emails</td>
<td>64%</td>
<td>27%</td>
<td>-</td>
<td>9%</td>
<td>-</td>
</tr>
<tr>
<td>d) Weekly team meeting</td>
<td>36%</td>
<td>9%</td>
<td>18%</td>
<td>9%</td>
<td>18%</td>
</tr>
<tr>
<td>e) Walking 1:1 meetings</td>
<td>9%</td>
<td>18%</td>
<td>27%</td>
<td>-</td>
<td>36%</td>
</tr>
<tr>
<td>f) Education and training</td>
<td>91%</td>
<td>9%</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

“People get used to their own comforts and they arrange their desks how they need it so it goes with their flow and it can really, really, it can be quite a big upheaval for somebody to move their workstations [...] they’ve got their own equipment like mouse mats or something like that then it can take some time for them to setup that workstation how they need it, you’re losing time” (T1)
<table>
<thead>
<tr>
<th>Percentage</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>91%</td>
<td>found the workstations easy to use</td>
</tr>
<tr>
<td>73%</td>
<td>disagreed that their work related productivity decreased as a result of using the desks</td>
</tr>
<tr>
<td>27%</td>
<td>experienced more musculoskeletal pain on the days when they used the desks</td>
</tr>
<tr>
<td>36%</td>
<td>were more tired on the days they used the desks</td>
</tr>
</tbody>
</table>

“I think just how simple it is just to lift it, you think it's going to be a real challenge and that its going to be really heavy but it's just a flick” (T1)
“for me it was a little bit messy because there were like stragglers and people on different teams [...] that's the bit that made it difficult to kind of remember exactly who was on it and who you were prompting” (MC)

“From MC point of view it would be good to make sure that they're following through and checking on those individuals, say are you sitting are you standing, how's it going, because I haven't seen any of that” (T1)

“If its on your team its more relevant, [Movement champion] has so much else to do, its finding the time to do it when the people that's they're targeting are all there [...] it's not always easy” (P11)
Engaging stakeholders important to identify key feasibility considerations in future trials;

✓ Adapt recruitment strategy to increase team leader buy-in and optimise engagement with agents

✓ Implement strategies to increase compliance to assessment protocol

✓ Provide participants with individual height-adjustable workstations
Future work:

1. Development

Study 1: Formative phase.

2. Pilot and feasibility

Study 2: 8-week non-randomised multi-level pilot and feasibility trial.

3. Evaluation

Study 3: 9-month pilot cRCT including an effectiveness and cost effectiveness evaluation

4. Implementation

(Craig, Dieppe et al. 2008)
Thank-you.
Any Questions?

Postgraduate researchers: Abigail Millard, Madeleine Cochrane, David Gavin

Supervisors: Dr Lee Graves, Dr Becky Murphy, Dr Sam Shepherd

Advisors: A/Prof Genevieve Healy, Dr Charlotte Edwardson, Prof David Dunstan

@LJMU_PAEx @abby_millard87
Evidence-based-practice-based-evidence

Academia
- Knowledge generation
  - Rigour
  - Significance
  - Originality

Public health
- External validity
- Delivery outputs
- Short-term outcomes
- Something that works!

Practicalities
- Multi-component, complex intervention
- Field data collection
- Short-term funding
- Human behaviour!

Co-production can meet these multiple needs, bringing evidence and practice together

Watson et al. (2013), Health Educ J, 72, 230-239
There is still work to do…
Co-production – questions for consideration

• Any positive examples of co-production through to implementation?
• What are the most appropriate dissemination channels for co-production work?
• How can we balance “power” between service-users, practitioners, commissioners, and academics – and do we need to?
Thank you for engaging

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Remarkable things can be achieved through working together