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Implementing and evaluating co-designed change in health

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Complete List of Authors:	Harrison, Reema; Macquarie University, Australian Institute of Health Innovation Ni She, Eidin; UNSW, School of Population Health; Macquarie University, Australian Institute of Health Innovation Debono, Deborah; University of Technology Sydney; Macquarie University, Australian Institute of Health Innovation
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1 Implementing and evaluating co-designed change in health

2 Contributions to the literature

- 3 • Current approaches to co-design in health predominantly focus on the participatory
4 elements of change proposals.
- 5 • There is limited attention given to implementation and evaluation of co-design in
6 healthcare services.
- 7 • The integration of implementation science frameworks within co-design provides a
8 novel approach to promote successful implementation of co-designed change.
- 9 • Ensuring co-designed change is adopted and embedded beyond the project lifecycle is
10 challenging. We outline how applications of implementation science frameworks may
11 support the implementation of co-designed change in healthcare.

12 Main text

13 Stemming from a long history of participatory methodologies, co-design has increasingly been
14 adopted to create health service change, with applications across a broad range of health
15 settings including mental health, oncology, critical care and more.(1) A requirement for health
16 systems to demonstrate person-centred and values based models of care has brought with it a
17 surge of interest in using co-design methodology to create change proposals, alongside the
18 integration of patient-reported measures into health care and service delivery evaluations.(2, 3)
19 Co-design and associated terms such as co-production, experience based co-design, and co-
20 creation are defined as a method of social inquiry. Co-design is distinguished from
21 participatory design in that participants share, with the researchers, equal power in decision
22 making about projects and outcomes.(4, 5)

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3 25 In healthcare, approaches such as experience-based co-design have been used predominantly
4
5 26 to better understand an individual's lived experience of their health conditions and/or
6
7 27 healthcare services in order to design care processes, services or models to better meets their
8
9 28 needs.(4, 6-8) The value of co-design operates at several levels including promoting consumer
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11 29 perspectives, placing value on expertise through lived experiences and creating access to
12
13 30 decision-making about healthcare change proposals.(9) Evaluations of co-designed change are
14
15 31 often focused on these immediate gains. Despite the identification of implementation phases
16
17 32 within co-design frameworks, evidence of the value of co-designed interventions once
18
19 33 implemented on improving health and care outcomes however is less clear.(10, 11) With
20
21 34 increasing focus on these evaluation gaps, we explore the potential contribution of
22
23 35 implementation science frameworks to enhance implementation of co-designed change in
24
25 36 healthcare and to evaluate whether co-design has made a difference to health and care
26
27 37 outcomes. We consider the role of sponsorship and leadership in ensuring co-designed change
28
29 38 is adopted beyond a project lifecycle role and how to retain co-design members
30
31 39 involvement.(12-14)

40 41 42 **Implementing co-designed change**

43 Bringing about change to create healthcare improvement continues to be a substantial challenge
44
45 44 due to the complexity of the context of healthcare, leading to limited realisation of benefits in
46
47 45 terms of healthcare or service delivery improvements.(15, 16) Co-design approaches that
48
49 46 harness the experiences of those with lived experiences provide a mechanism to increase
50
51 47 stakeholder engagement with a change proposal. They can also enhance the suitability and
52
53 48 relevance of the proposal and stakeholder commitment to therefore adopting the proposed
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55 49 change.(17) Whilst opportunities to harness user experience to design change have been widely
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57 50 adopted, the use of co-design to prospectively explore implementation barriers and concerns

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3 51 amongst end users and stakeholders (including health system and service leaders and policy-
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5 52 makers) as a strategy to ensure co-designed change is adopted beyond a project lifecycle has
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7
8 53 received limited attention to date.

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12 55 A commonly held assumption is that co-designing an intervention (that is fit for purpose and
13
14 56 has buy in), will, in and of itself, act to support implementation. Intentional discussions about
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17 57 implementation of co-designed interventions do not occur routinely, tend to be unstructured
18
19 58 and focus on implementation barriers that are front of mind, potentially obscuring less evident,
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22 59 but powerful factors that may influence implementation success.(18, 19) Latent influences such
23
24 60 as systemic bias and healthcare cultures may be at odds with novel strategies, especially those
25
26 61 developed for seldom heard and minority populations.(20) Early phases of co-design often
27
28 62 include evidence gathering of experiential data via interview or other methods in which factors
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31 63 with potential to impact implementation may be identified informally. We propose that
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33 64 applying a structured approach, informed by implementation science theories or frameworks
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35 65 to guide evidence gathering in the early stages of co-design may lead to the intentional
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37 66 identification of issues that may ultimately impact implementation of co-designed change at
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40 67 the end of the project. Drawing on categories of theoretical approaches used in implementation
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42 68 science described by Per Nilsen's (2015), we highlight how different implementation theories,
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44 69 frameworks and models can be utilised proactively to give greater consideration to the
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47 70 implementation of co-designed change.

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72 Proactively exploring and addressing implementation

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74 Determinant implementation science frameworks, such as the Consolidated Framework for
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76 Implementation Research (CFIR), Theoretical Domains Framework, and PARIHS identify a
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78 range of determinants - domains or categories of barriers and enablers - that influence

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3 77 implementation outcomes.(21, 22) These domains or categories may be used to develop
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5 78 interview schedules used to capture lived experiences in the early stages of co-design, and in
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8 79 this way, guide comprehensive, prospective exploration of implementation issues ahead of
9
10 80 intervention development and implementation as noted by Damschroeder et al.(23) Process
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12 81 models, such as the Knowledge to Action Framework, can be used to identify key features of
13
14 82 successful implementation and to inform the co-design of planned implementation strategies,
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16 83 which may be developed to accompany the co-design on an intervention.
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19 84

85 **Harnessing human influences in consolidating implementation**

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87 How can participants who were involved in the co-design project have oversight and
88 involvement in the implementation state, or even support its success? Often people leave a co-
89 design process and think it is the responsibility of others to implement what has been
90 designed.(24) Drawing on classic theories, such as the Theory of Diffusion, co-designed
91 implementation strategies can proactively consider the role of leaders, change agents and gate
92 keepers – as best understood by those involved in the co-design process. This may extend to
93 considering the role of the members of the co-design themselves who may contribute
94 significant value in the implementation of co-designed change as they (consumer, health
95 professional and other stakeholders) can champion and communicate the change back to their
96 communities and networks. (25, 26) The literature notes that often no feedback loops are
97 enabled for participants involved in co-design as the work is implemented.(27) Overlooked in
98 co-design is any guidance on what role people have can have to support implementation.

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100 Implementation science frameworks tell us that those involved in the co-design process are
101 best placed to understand and design for the context-specific nuances of the four determinants
102 that Normalisation Process Theory (NPT) identifies as necessary to ‘normalise’ or embed

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3 103 complex interventions in practice. NPT identifies coherence/sense making;
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5 104 engagement/cognitive participation; collective action; reflexive monitoring (Nilsen, P., 2015)
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8 105 as factors that influence the routine incorporation of complex interventions into everyday
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10 106 practice beyond their early implementation. Co-designed change creates new approaches to
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12 107 delivering care that may be associated with requirements for behavioural change and financial
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14 108 or human resourcing by healthcare teams and providers. Implementation success and its
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16 109 sustainment may therefore be contingent upon resource and support from senior leaders for the
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18 110 change proposed.(27) The NPT provides a structured approach to consider the role of senior
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20 111 healthcare leadership and their sponsorship of co-designed change efforts in implementation
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22 112 success.
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114 [Evaluating co-designed change](#)

115 Growing utilisation of co-design, coupled with evidence of the potential value and also
116 unintended consequences, means that there is now a need for further guidance about how to
117 evaluate the use of co-design and its impacts on health and care outcomes.(4, 28) We propose
118 that evaluation of co-design requires three broad components: process analysis of the co-
119 design, evaluating intervention effects on the desired health and/or care outcomes, and a
120 process of mapping design features to intervention elements and their impacts. Process
121 evaluations often use qualitative methods such as interview and observation to determine how
122 a process has occurred, often utilised in evaluations of the implementation of complex
123 healthcare interventions.(29) In co-design, process evaluation may be used to establish the
124 ways in which and extent to which stakeholders contributed to the design in order to evaluate
125 the extent to which the co-design process supported depth and diversity of contribution, but
126 also to explore the ways in which the contributions of co-design members shaped the resulting
127 intervention or change proposal. When evaluating co-designed intervention effects on the

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3 128 intended health or care outcomes, the contribution of co-design specifically to the intervention
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5 129 outcomes is challenging to delineate but important to understand given the resource and
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8 130 personal investment in co-design processes. The broad ranging influences of using co-design
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10 131 on change proposals prohibit the delineation of direct causal links between the use of co-design
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12 132 and improved health or care outcomes from resulting interventions. Yet mapping activities
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14 133 drawing on techniques from implementation science such as implementation mapping may
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16 134 provide some indication of the ways in which co-design has impacted intervention components
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19 135 which, in turn, influenced intervention success with regard to improved health or care
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21 136 outcomes. Intervention mapping describes a process of connecting theory-based methods with
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23 137 practical strategies to develop an intervention that can then be evaluated comprehensively.(30)
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26 138 Unlike current applications of intervention mapping, co-design does not seek to produce
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28 139 theory-based interventions, but there are some common principles that might be useful in
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30 140 evaluating co-design. Identifying the ideas that emerged from lived experiences, mapping their
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32 141 links with the practical strategies that were then developed and used in the intervention, and
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34 142 evaluating the effects of these strategies could provide some indicative information about the
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36 143 contributions of co-design to the interventions effects on health or care outcomes.
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41 42 43 145 Conclusion

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46 146 Opportunities to harness user experience to co-design healthcare change have been widely
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48 147 adopted from policy to practice worldwide. In order to realise the benefits of the resultant co-
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50 148 designed change proposals, better understanding of how to support successful implementation
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52 149 of co-designed change and evaluatiuon of its impacts of health and care outcomes are needed.
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54 150 We identify a range of ways in which implementation science technqiues may support this
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56 151 process. Critical to the success of co-designed change it the role of senior leaders in supporting
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3 152 implementation of co-design, championing the pathway from resourcing co-design activities
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5 153 through to implementation and evaluation.(7)
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