Theory and practical guidance for effective de-implementation of practices across health and care services: a realist synthesis

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Scientific summary

Effective de-implementation of health and care services practices

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Scientific summary

Background

In recent years there has been a significant emphasis on health and care delivery that is efficient, prudent and makes best use of resources, particularly where resources are limited. Despite this focus, there is evidence to show that non-evidence-based decisions or treatments that are known to have poor outcomes and are of low value continue to be made and used.

There is often insufficient consideration about how best to stop or withdraw existing practices and services that have been identified as low value, non-evidence based or unsafe. This is the knowledge gap that has led to this review being undertaken.

Objectives

The main aim of this review was to produce useful programme theory and practical guidance for policy-makers, managers and clinicians to help them with de-implementation processes and procedures. The objectives of the review were to:

- generate a concept analysis of de-implementation
- identify and map the range of different de-implementation approaches and/or strategies currently being utilised across health and care, paying attention to ways in which they are assumed to work
- produce a typology of de-implementation types, processes and contexts
- examine and understand the range of anticipated and unanticipated impacts of these approaches and/or strategies across different settings and stakeholders, paying attention to contextual conditions that influence these impacts
- generate an evidence-based realist programme theory that explains the successful processes and impacts of de-implementation
- explore, through stakeholder engagement in the review methods, decision-making processes associated with de-implementation
- produce recommendations about ways in which different approaches and/or strategies can help managers and service leaders plan and prioritise de-implementation in a systematic and efficient manner
- stimulate a wider debate about avoiding and stopping services that are considered wasteful, of low value and non-efficient for future provision.

Methods

A realist synthesis was seen as the most appropriate method to conduct this review because of the complex array of approaches to de-implementation operating in a variety of contexts. Realist synthesis is theory driven, whereby the focus is on understanding underlying elements or mechanisms of a programme that interact within contexts to result in success or failure. Using this approach is a recognition that de-implementation programmes are implemented in different contexts and, hence, operate through different mechanisms to produce different patterns of outcomes. An added feature of this review was the development of a concept analysis of de-implementation.

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The realist synthesis was undertaken over four phases, and the review process iterated between theory development, interrogation of evidence and theory refinement based on the team's previous experiences. The four phases are as follows.

1. Development of the concept analysis and initial programme theory through a scoping of the literature and consultation with key stakeholders (i.e. user/patient representatives, senior clinical managers, commissioners, health service administrators and academics involved in implementation research). Concept analysis is a way of clarifying concepts that have multiple and confusing meanings. De-implementation is one such concept, as it is used inconsistently and interchangeably in the literature. Developing clarity of de-implementation aided the construction of the initial programme theory.
2. Systematic searches of the evidence to develop and test the theories identified in Phase 1. Using keywords identified during the scoping work and concept analysis, searches of bibliographic databases were conducted in May 2018. The databases searched were the Cochrane Library, Campbell Collaboration, MEDLINE (via EBSCO*host*), the Cumulative Index to Nursing and Allied Health Literature (via EBSCO*host*), the National Institute for Health Research Journals Library and the following databases via the ProQuest platform: Applied Social Sciences Index and Abstracts, Social Services Abstracts, International Bibliography of the Social Sciences, Social Sciences Database and Sociological Abstracts. Alerts were set up for the MEDLINE database from May 2018 to December 2018. Online sources were searched for grey literature and snowballing techniques were used to identify clusters of evidence.
3. Refining of programme theories with a purposive sample of stakeholders, as described in Phase 1. This involved telephone interviews with 21 participants.
4. Development of actionable recommendations for interventions that help the de-implementation of low-value treatments and services.

Results

The concept analysis showed that de-implementation is associated with five main components in context and over time: (1) what is being de-implemented, (2) the issues driving de-implementation, (3) the action characterising de-implementation, (4) the extent that de-implementation is planned or opportunistic and (5) the consequences of de-implementation. Forty-two papers were synthesised to identify six context–mechanism–outcome configurations that provide an explanatory account of how de-implementation interventions might work to reduce or remove treatments or processes that have limited or low value.

Context–mechanism–outcome 1: nudging behaviour towards de-implementation

De-implementation interventions that attempt to change clinician behaviour in the context of fast or habitual decision-making (context) may be effective when they include aspects of pre commitment, accountable justification that requires clinicians to state why a low-value practice should be implemented and benchmarking performance against peers. Changes in practice may be prompted by slowing decision-making through increasing attention to the low-value practice behaviour (mechanism 1), ensuring that practice is consistent with an individual patient's expectations (mechanism 2) and prompting professionals' concerns about professional reputation (mechanism 3). Effectiveness was mixed across changes to professional behaviour, with impacts visible on communication with patients (outcome 1) and in some aspects of prescribing practice (outcome 2).

Context–mechanism–outcome 2: designing de-implementation through technology

In the context of clinical practice underpinned by electronic health records, de-implementation interventions that amend the design of these systems (context) may be successful when their design makes sustaining low-value practice harder (mechanism). Things may be made harder by changing information displays/choice options. Effectiveness was demonstrated in the reduction of orders for unnecessary diagnostic tests (outcome).

Context–mechanism–outcome 3: improving individuals' practice

The potential to increase professionals' capability to de-implement when there is concern or uncertainty about, or variation in, a specific practice issue or problem (context) and increasing knowledge of, and skills related to, the evidence to drive de-implementation (mechanism) can lead to reductions in the rates of inappropriate ordering of routine investigations and in inappropriate prescribing (outcome).

Context–mechanism–outcome 4: engaging positively with patients

Clinicians may face difficulties in managing situations where they are uncertain about diagnoses or where patients themselves request interventions that have demonstrable low value (context). In these contexts, interventions that seek to enhance professionals' communication skills, utilise 'watchful waiting' as an alternative active intervention strategy or that engage directly with patients, can enhance patients' sense of validation of their concerns without resorting to sustaining the low-value practice (mechanism). When this occurs, it is possible to see an increase in patients' sense of autonomy and motivation to disengage from the low-value practice, an improvement in the quality of the patient–professional relationship and reductions in low-value practices, such as inappropriate routine investigations and prescribing (outcome).

Context–mechanism–outcome 5: supporting staff to de-implement

De-implementation strategies may be less effective when strong interpersonal relationships are developed between clinicians and patients (context). Better communication and engagement with stakeholders, including patients, and professionals' confidence building can validate concerns around potential risks of de-implementation, the quality of patient care and service ethos (mechanism), leading to a mitigation of professionals' emotional burden (outcome).

Context–mechanism–outcome 6: aligning multiple perspectives

In the context of embedded low-value practices (context), when there are no financial disincentives, a whole-system approach to de-implementation would appear to be more effective. When a whole-system approach to de-implementation includes combinations of a multicomponent de-implementation intervention, engagement of the multiprofessional team and advocacy or service user involvement, the perception of a more aligned approach fosters trust (mechanism), which then can bolster success in generating behaviour change predominantly within de-prescribing (outcome).

Conclusions

This realist synthesis provides a theory-driven understanding of the evidence and provides a clearer identification of a range of interventions that have the potential to underpin successful de-implementation strategies across health and care. Through the concept analysis, we found that de-implementation is a function of what is being de-implemented (i.e. from professional behaviours and treatments to service provision), the momentum behind the de-implementation (e.g. if there is lack of evidence, financial benefit or safety concerns), the nature of action (e.g. complete removal or reduction or replacement by another intervention) and the degree of intentionality (i.e. either planned or opportunistic). This can result in intentional and unintentional consequences affecting different stakeholders in different ways over time.

The review suggests that there is a need to co-ordinate and align de-implementation interventions across health and care organisations. This ranges from alerting clinicians to their habitual day-to-day decision-making, both through development of their knowledge and skills around de-implementation, and providing collegiate feedback on their decision outcomes against accepted benchmarking. Electronic and other standardised systems can be redesigned to hide low-value options and forefront treatments that are more appropriate. Professional uncertainty about the benefits of certain treatments or patient requests for low-value investigations can generate emotional burden in the patient–professional relationship, which creates barriers that lessen the effect of de-implementation indicatives. The use of watchful waiting as a consultation strategy can validate professional and patient concerns mitigating the emotional effects.

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Actionable recommendations

- To provide alternative interventions, including watchful waiting, when there is no high-value alternative, ensuring that there is a time frame for review.
- To remove low-value options from decision-making, systems, processes and tools.
- To engage service users in de-implementation by amending expectations around low-value care and treatment options.
- To consider opportunities for surveillance of low-value practices.
- To avoid reliance on enhancing communication skills alone to deliver de-implementation strategies.
- To assess the degree of alignment between public, professional and patient narratives around de-implementation at different levels (i.e. local and national).
- To carefully consider the consequences of de-implementation for patient and professional relationships.
- To carefully manipulate concerns about professionals' reputation by seeking additional justification for low-value treatment options and benchmarking professional practice.
- To embed uncertainty about negative evidence and decision-making in pre-registration education.
- To consider the nature of decision-making around low-value practice, including how it is supported by systems, processes and tools.
- To raise awareness of low-value practice through education and training, as part of a broader approach.

Recommendations for future research

- Further investigation of decision-making processes other than for type 1 decisions for de-implementation is required.
- Further investigation to identify opportunities for new interventions that draw on non-traditional theories (e.g. design, aesthetics) and organisational theories to gain new insights.
- Research should aim to further the theoretical basis for de-implementation, taking into account the discourse relating to practice (e.g. decommissioning services).
- Research should consider how de-implementation can be investigated in the context of randomised controlled trials.
- Research should aim to further enhance the description of, and therefore gain clearer clarity around, programme theory and de-implementation interventions.
- Research should consider de-implementation and implementation as polar entities on a continuum of knowledge-informed change and learn about different issues that are more or less evident along the continuum.
- Research should consider further conceptual development of de-implementation.

Study registration

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