

De-implementing low-value care: Considerations for assessing outcomes and for understanding the interplay with health equity

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Learning objectives:

1. Be able to describe three considerations for assessing outcomes when studying de-implementation
2. Name three unique challenges related to equity in de-implementation
3. Explain three possible solutions that implementation scientists can adopt to address equity challenges in research on de-implementation

Considerations for assessing outcomes in de-implementation

Three considerations for assessing outcomes when studying de-implementation or developing de-implementation programs:

Unintended consequences: Psychological reactance (anger & mistrust). Both patients and providers could potentially experience de-implementation efforts as an infringement, for patients on their right to receive services, and for providers on their professional prerogative. People often respond to threats to freedom with anger & mistrust, termed psychological reactance. This is probably not just an issue for de-implementation--implementation efforts probably also carry some risk of provoking psychological reactance, especially among providers--but it's almost certainly worse for de-implementation because (a) de-implementation can be perceived as motivated by cost; and (b) for providers, it's more likely than implementation to be taken as an implicit criticism of their practice (e.g., they're telling me to stop doing this because I'm a bad doctor/nurse/therapist). Anger is likely transitory but mistrust may persist (Helfrich et al 2022); there is a risk that we not only damage a given effort to reduce low-value care, but poison the relationships we need for future efforts to improve quality. This response is something we need to assess and address by involving stakeholders early, and collecting data on participants' experiences.

Intervention-outcome asymmetry: In implementation efforts, the intervention outcome is the benefit from implementing the evidence-based practice; at least in principle, the clinician or practitioner who is implementing the evidence-based practice is delivering some benefit to their patient. However, for de-implementation efforts, the expected benefit is typically an absence of bad outcomes--from the provider's or practitioner's perspective, the best expected outcome is often literally *nothing*: a low-value inhaler is eliminated & the patient doesn't experience a breathing exacerbation; a low-value cancer screening is forgone & the patient never develops cancers; or a patient who has an upper respiratory infection doesn't receive an antibiotic and it resolves on its own in a couple of weeks (Helfrich et al 2022). The problem this creates for the provider or practitioner is that they may experience a real risk of a bad outcome, e.g., an angry patient or a random bad event, and conversely fail to perceive any real benefit. More so than implementation interventions, de-implementation may require implementation researchers to engineer feedback that helps reveal the benefits to stakeholders and create positive reinforcement for de-implementation.



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Measuring (de-)implementation outcomes: Proctor and colleagues established a set of outcomes specific to implementation, meaning factors that implementation strategies could or need to influence in order to achieve high levels of implementation. These include acceptability, adoption, appropriateness, feasibility, fidelity, implementation cost, penetration, and sustainability. These can be equally applied to much of our de-implementation work, but in some cases, e.g., certain tests and imaging, patients and provider (or other stakeholder) perceptions of the low-value practice are difficult to assess and even potentially introduce confusion. For example, patients about to receive a non-cardiac surgery may not even be aware that cardiac stress tests are often inappropriately used to assess patient eligibility ahead of the surgery; assessing patient perceptions of acceptability of de-implementing cardiac stress tests may at best be meaningless and at worst confusing for a patient. It may be that the concept still applies (e.g., how acceptable the patient or provider will find the idea of having a common practice curtailed) but it may need to be assessed with different measures or methods, such as more open-ended qualitative methods.

Equity and de-implementation: Unique or special challenges

Within insured populations (e.g., a given managed care organization, or within Medicare), we can end up in a situation where some patients subsidize low-value care delivered to other patients. This is because all patients pay into insurance, but receipt of low-value care can vary substantially among patients. There is some research that finds more socially or economically advantaged patients are more likely to receive low-value care. For example, an analysis of Medicare data found that the highest income women received more low-value mammograms relative to poor women, and the size of this disparity increased over time (Xu et al, 2017). Across a range of low-value screening tests, the result was that 10%-15% of the sample received what the researchers termed a “negative subsidy” (meaning they paid for more care than they received), and this was primarily among socioeconomically disadvantaged patients. So low-value care that primarily affects white, middle-class patients, can still have direct effects on minority and/or socioeconomically disadvantaged patients.

There are examples where African-American patients are subject to both more low-value care & less high-value care (Schpero et al 2017) and examples where African-American patients receive less care--less high-value care but also less low-value care (Kressin & Groeneveld, 2015). We refer to the former as the *double-jeopardy* model and the latter as the *thermostat* model (thermostat because the idea is we’re just raising or lowering the amount of care whether high-value or low-value care). Why does that happen--what’s different in those cases where we observe double-jeopardy versus the thermostat model? We don’t understand this well, though there might be insights from equity research that are not understood by implementation researchers and vice-versa. There’s also the possibility that there are other less-well defined or studied subgroups (e.g., immigrants, sexual minority patients, geographically isolated patients) who also experience double-jeopardy.

Patient experience of low-value care: There are some documented differences among patients by race and gender in their relative concerns about overuse and under-use, and feeling like their clinicians are providing care when less expensive options are available (Kressin & Lin, 2015; Groenevald et al 2008). These patient-level experiences have profound implications for how patients respond to our de-implementation efforts--you can draw a direct line from patient experience back to psychological reactance (specifically mistrust/counter-arguing) and to measuring implementation outcomes such as acceptability. We have to anticipate that different groups of patients might interpret and experience de-implementation efforts very differently.



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Solutions that implementation scientists can adopt to better address equity in de-implementation

- Specifically testing de-implementation strategies' effects on equity, including at the population level to reveal both(both what?) in terms of patient experience of de-implementation and effects on low-value care outcomes.
- Specifying and measuring potential mechanisms driving low-value care and the mechanisms we intervene on during de-implementation in order to better understand the double jeopardy vs. thermostat models of overuse among patient subgroups.
- Subgroup analyses, e.g., of experiences of low-value care and of de-implementation strategies. Using patient/stakeholder advisory groups to lead this work.

This content was adapted from:

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