

## Supplementary file 1 Justification for the search strategy

### Research question

The research question was: *“What are the key concepts and gaps in the evidence regarding multicomponent processes used to identify low value care in hospital settings with a view to de-implementing that low value care?”*

### Search strategy for all databases

("low value" OR "low-value" OR "low-added value")

### Justification

1. We chose the search strategy ("low value" OR "low-value" OR "low-added value") on advice from two research librarians with extensive experience in systematic and scoping reviews.
2. “Low value” as it pertains to healthcare appeared to be a well establishment concept with a reasonable breadth of literature related directly to the term itself and its identification, therefore we used “low value” and the alternate spelling “low-value”. This aligns with the Joanna Briggs definition of the purpose of scoping reviews that includes mapping key concepts, clarifying definitions, and identifying conceptual boundaries of a topic (1)
3. “Low-added value” was added as we found that there were a few key papers that were missing from our original search using "low value" OR "low-value" alone.
4. A number of systematic reviews (2,3) and scoping reviews (4-6) exist using “low value” or “low value care” as a key search terms.
5. “Low value care” was a candidate term for MeSH, which further emphasizes being relatively well-established as a healthcare concept.
6. We did not include the word “care” in relation to “low value” as our current search would include all those papers with the phrase “low value care” whilst not excluding any that might have slight variations such as “low value healthcare”. Whilst this would increase the initial search numbers, it was agreed that it would be feasible given the overall numbers to exclude any articles that were not relevant in the title and abstract screening stage.
7. A range of synonyms of “low value care” were tested. This was to consider the multiple alternate ways in which the “low value care” concept could be defined. These were found to be both too broad, and unable to capture the “low value care” concept fully.  
Tested terms included: *De-implement\* or deimplement\* or "choosing wisely" or contradict\* or deadopt\* or de-adopt\* or disadopt or dis-adopt or decommission\* or de-commission\* or delist\* or de-list\* or disinvest\* or dis-invest\* or deprescrib\* or*

- de-prescrib\* or abandon\* or chang\* or reduc\* or discontinue\* or decreas\* or remov\* or "do not do" or avoid\* or reassess\* or re-assess\* or refut\* or obsol\* or revers\* or discontinue\* or dis-continu\* or withdraw\* or stop\* or re-apprais\* or re-prioriti\$\* or re-deploy\* or declin\* or replace or harmful or ineffectiv\* or outmode\* or "Unwanted clinical variation\*" or "unwarranted clinical variation\*" or underuse\* or wasteful\* or overus\* or misus\* or unnecess\* or "no patient benefit" or "over treat\*" or overtreat\* or "under treat\*" or undertreat\* or "over diagnosis" or overdiagnosis or "under diagnosis" or underdiagnosis or "over screen\*" or overscreen\* or "under screen\*" or underscreen\* or or "inappropriate referral\*" or "inappropriate treatment" or "inappropriate screening" or "limited benefit\*" or "not cost-effective" or "not effective" or "poor outcomes" or overutili\$\* or "over utili\$\*" or underutili\$\* or "under utili\$\*" or "medical overuse" or "health service\* misuse" or obsol\**
8. It was agreed, on advice from two research librarians with extensive experience in systematic and scoping reviews, that the addition of synonyms relating to “identification” into our search would likely narrow the search too much as well as potentially exclude key articles if all potential synonyms (of which there would be many) were included.
  9. We did not restrict for language during the search stage which aligns with PRISMA guidelines that suggest no imposing database limits where possible to avoid high potential for introducing bias (7).

## References

1. Aromataris E, Munn Z, eds. JBI Manual for Evidence Synthesis. JBI, 2020. <https://synthesismanual.jbi.global>. (Accessed 26.06.2023)
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3. Sypes EE, de Grood C, Clement FM, et al. Understanding the public’s role in reducing low-value care: A scoping review. *Implement Sci*. 2020;15(1):20.
4. Augustsson H, Ingvarsson S, Nilsen P, et al. Determinants for the use and de-implementation of low-value care in health care: a scoping review. *Implement Sci Commun*. 2021;2(1):13.
5. Moore L, Lauzier F, Tardif PA, et al. Low-value clinical practices in injury care: A scoping review and expert consultation survey. *J Trauma Acute Care Surg*. 2019;86(6):983-93.
6. Parker G, Kastner M, Born K, et al. Understanding low-value care and associated de-implementation processes: A qualitative study of Choosing Wisely Interventions across Canadian hospitals. *BMC Health Serv Res*. 2022;22(1):92.
7. Rethlefsen ML, Kirtley S, Waffenschmidt S, et al. PRISMA-S: an extension to the PRISMA Statement for Reporting Literature Searches in Systematic Reviews. *Syst Rev* 2021; 10:39.