Bilaga 1. Appendix 1 Search strategies

If all or a substantive part of the search strategies below are reused in another publication, please cite this report!

Database: Embase

Interface: embase.com

Date of search: 17 March 2026

Note: *Search for systematic reviews*

Search terms		Items found
Population: Dentistry		
1.	'dentistry'/exp OR 'dental procedure'/exp OR 'biomedical and dental materials'/exp OR 'mouth disease'/exp OR 'dentist'/exp OR 'jaw disease'/exp OR 'dental device'/exp	2,512,028
2.	'apical periodontitis':ti,ab OR 'apical surgery':ti,ab OR 'bone augment*':ti,ab OR bruxism:ti,ab OR caries:ti,ab OR 'craniofacial surgery':ti,ab OR dental:ti,ab OR dentist*:ti,ab OR endodontic*:ti,ab OR exodontic*:ti,ab OR 'fixed appliance':ti,ab OR gingivt*:ti,ab OR jaw:ti,ab OR malocclusion:ti,ab OR 'maxillofacial surgery':ti,ab OR ((oral NEAR/2 (crowns OR disease* OR disorder* OR fixture* OR health OR implant OR implants OR prosthesis OR status)):ti,ab) OR 'oral surgery':ti,ab OR orthodontic*:ti,ab OR 'orthognatic surgery':ti,ab OR orthopanthomogram:ti,ab OR osteitis:ti,ab OR pedodontic*:ti,ab OR periapical:ti,ab OR periradicular:ti,ab OR periodont*:ti,ab OR polpotomy:ti,ab OR 'pulp capping':ti,ab OR 'pulp therapy':ti,ab OR 'pulp treatment':ti,ab OR 'pulpal necrosis':ti,ab OR pulpectomy:ti,ab OR pulpitis:ti,ab OR prosthodontic*:ti,ab OR 'removable appliance':ti,ab OR 'root canal':ti,ab OR teeth:ti,ab OR temporomandibular:ti,ab OR tooth:ti,ab OR veneer*:ti,ab	735,919
3.	#1 OR #2	2,706,065
Low-value care		
4.	'deprescription'/de OR 'health service misuse'/de OR 'low-value care'/de OR 'medical overuse'/exp OR 'potentially inappropriate medication'/de OR 'prescribing error'/de OR 'unnecessary prescribing'/exp	30,096
5.	'low value':ti OR 'choosing wisely':ti,ab OR 'do not do':ti,ab OR overdiagnosis:ti,ab OR overtreatment:ti,ab OR overuse:ti,ab	51,017
6.	((('low value' OR 'low-value' OR 'lower value' OR 'lower-value') NEAR/2 (care OR healthcare OR 'health services' OR imaging)):ti,ab) OR (((abandon OR inappropriate OR ineffective OR inefficient OR 'no clinical benefit' OR 'no added value' OR 'no value' OR obsolete OR outmoded OR unnecessary OR wasteful) NEAR/1 (care OR 'clinical practice*' OR 'diagnostic imaging' OR examination* OR healthcare OR 'health services' OR imaging OR intervention* OR 'medical services' OR medication OR medicine OR order* OR practice* OR preoperative OR prescribing OR procedure* OR services OR technolog* OR test* OR testing OR therap* OR treat*)):ti,ab)	39,314
Medical waste		
7.	'hospital waste':ti,ab OR 'medical waste':ti,ab OR 'biomedical waste':ti,ab OR 'bio-medical waste':ti,ab OR 'healthcare waste':ti,ab OR 'health-care waste':ti,ab OR 'care waste':ti,ab	3,190
Disinvestment		
8.	'disinvestment'/de	106
9.	deadopt*:ti,ab OR 'de adopt*':ti,ab OR decommission*:ti,ab OR 'de commission*':ti,ab OR deimplement*:ti,ab OR 'de implement*':ti,ab OR deinvest*:ti,ab OR 'de invest*':ti,ab OR delist*:ti,ab OR 'de list*':ti,ab OR disadopt*:ti,ab OR 'dis adopt*':ti,ab OR 'dis invest*':ti,ab OR disinvest*:ti,ab OR 'medical reversal':ti,ab OR 'health technology reassessment':ti,ab OR 'health technology re-assessment':ti,ab	6,340
Additional terms for low-value care/disinvestment		
10.	abandon:ti OR appropriate*:ti OR deinstitutionali*:ti OR 'de institutionali*':ti OR deprescri*:ti OR 'de prescri*':ti OR discontinue*:ti OR 'dis continue*':ti OR inappropriate:ti OR ineffective:ti OR inefficient:ti OR 'lower value':ti OR 'no clinical benefit':ti OR 'no value':ti	62,312

	OR 'no added value':ti OR obsolete:ti OR outmoded:ti OR overutili*:ti OR reallocat*:ti OR 're allocat*':ti OR unnecessary:ti OR wasteful:ti	
11.	(('low value' OR 'low-value' OR 'lower value' OR 'lower-value') NEAR/2 (dent* OR oral OR service* OR work)):ti,ab	322
12.	((abandon OR inappropriate OR ineffective OR inefficient OR 'no clinical benefit' OR 'no added value' OR 'no value' OR obsolete OR outmoded OR unnecessary OR waste*) NEAR/3 dent*):ti,ab	508
Combined sets		
13.	#4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12	166,598
Study types: systematic reviews and meta-analyses		
14.	'systematic review'/de OR 'meta analysis'/de OR [cochrane review]/lim OR 'biomedical technology assessment'/de OR ((comprehensive* NEAR/4 review) OR 'evidence-based review' OR 'evidence review' OR 'evidence synthesis' OR hta OR 'integrated literature review' OR 'integrated review' OR (integrative NEAR/4 review) OR 'integrative overview' OR 'mapping review' OR meta-analy* OR metaanaly* OR meta-ethnography OR metaethnograph* OR meta-review OR 'meta synthesis' OR metasynthesis OR 'meta study' OR metastudy OR 'methodological overview*' OR 'methodologic overview*' OR 'methodological review*' OR 'methodologic review*' OR (('mixed method*' OR 'mixed stud*') NEAR/4 review) OR 'overview of reviews' OR QES OR (qualitative NEAR/2 synthesis) OR 'quantitative overview*' OR 'quantitative review' OR 'quantitative synthesis' OR 'rapid review' OR 'realist synthesis' OR (realist NEAR/4 review) OR 'research overview*' OR 'research synthesis' OR 'review of reviews' OR 'scoping literature review' OR 'scoping review' OR 'technology assessment*' OR (systematic* NEAR/4 review*) OR 'systematic overview*' OR 'systemic review*' OR 'umbrella review*'):ti	914,777
Combined sets		
15.	*#3 AND #13 AND #14*	*264*
16.	*#15 NOT ('clinical trial'/it OR 'conference abstract'/it)*	*216*
Final result		
17.	**#15 NOT ('clinical trial'/it OR 'conference abstract'/it) AND ([danish]/lim OR [english]/lim OR [norwegian]/lim OR [swedish]/lim)**	**215**

The final search result, usually found at the end of the documentation, forms the list of abstracts.

/de = Term from the Emtree controlled vocabulary; **/exp** = Includes terms found below this term in the Emtree hierarchy; **/mj** = Major Topic; **:ab** = Abstract; **:au** = Author; /sd= Since date; **:kw** = Author keyword ; **:ti** = Article Title; **:ti,ab** = Title or abstract; ***** = Truncation; **' '** = Quotation marks; searches for an exact phrase; **NEAR/n** = Retrieves terms that are within "n" words of each other in either direction; **NEXT/n** = Requests terms that are within "n" words of each other in the order specified; **$** = replaces one or no letters; **?** = replaces one letter

Database: Medline

Interface: OvidSP

Date of search: 17 March 2026

Note: *Search for systematic reviews*

	Search terms	Items found
Population: Dentistry		
1.	exp "Biomedical and Dental Materials"/ OR exp Dental Facilities/ OR exp Dental Health Services/ or exp Dentistry/ or exp Dental Staff/ or Oral Health/ OR exp Stomatognathic Diseases/	1645414
2.	(apical periodontitis or apical surgery or bone augment* or bruxism or caries or craniofacial surgery or dental or dentist* or endodontic* or exodontic* or fixed appliance or gingivt* or jaw or malocclusion or maxillofacial surgery or (oral adj2 (crowns or disease* or disorder* or fixture* or health or implant or implants or prosthesis or status)) or oral surgery or orthodontic* or orthognatic surgery or orthopanthomogram or osteitis or pedodontic* or periapical or periradicular or periodont* or polpotomy or pulp capping or pulp therapy or pulp treatment or pulpal necrosis or pulpectomy or pulpitis or prosthodontic* or removable appliance or root canal or teeth or temporomandibular or tooth or veneer*).ti,ab,kf,bt.	703795
3.	or/1-2	1885381
Low-value care		
4.	Deprescriptions/ or Health Services Misuse/ or Inappropriate Prescribing/ or Low-Value Care/ or Medical Overuse/ or Overtreatment/ or Potentially Inappropriate Medication List/ or Unnecessary Procedures/	20036
5.	low value.ti,bt. or ("choosing wisely" or "do not do" or overdiagnosis or overtreatment or overuse).ti,ab,kf,bt.	33192
6.	((("low value" or "low-value" or "lower value" or "lower-value") adj2 (care or healthcare or "health services" or imaging)) or ((abandon or inappropriate or ineffective or inefficient or "no clinical benefit" or "no added value" or "no value" or obsolete or outmoded or unnecessary or wasteful) adj1 (care or "clinical practice*" or diagnostic imaging or examination* or healthcare or "health services" or imaging or intervention* or "medical services" or medication or medicine or order* or practice* or preoperative or prescribing or procedure* or services or technolog* or test* or testing or therap* or treat*))).ti,ab,kf,bt.	24897
Medical waste		
7.	("hospital waste" or "medical waste" or "biomedical waste" or "bio-medical waste" or "healthcare waste" or "health-care waste" or "care waste").ti,ab,kf,bt	2595
Disinvestment		
8.	(deadopt* or de-adopt* or decommission* or de-commission* or deimplement* or de-implement* or deinvest* or de-invest* or delist* or de-list* or disadopt* or dis-adopt* or dis-invest* or disinvest* or "medical reversal" or "health technology reassessment" or "health technology re-assessment").ti,ab,kf,bt.	6091
Additional terms for low-value care/disinvestment		
9.	(abandon or appropriate* or deinstitutionali* or de-institutionali* or deprescri* or de-prescri* or discontinue* or dis-continue* or inappropriate OR ineffective OR inefficient OR lower value or "no clinical benefit" OR "no value" OR "no added value" OR obsolete OR outmoded OR overutili* or reallocat* or re-allocat* or unnecessary OR wasteful).ti,bt.	44999
10.	(("low value" OR "low-value" OR "lower value" OR "lower-value") adj2 (dent* or oral or service* or work)).ti,ab,kf,bt.	226
11.	(dent* adj3 waste).ti,ab,kf,bt.	185
Combined sets		
12.	or/4-11	117084
Study types: systematic reviews and meta-analyses		
13.	Systematic Review/ or Meta-Analysis/ or Network Meta-Analysis/ or Technology Assessment, Biomedical/ or Cochrane Database Syst Rev.ja. or (comprehensive review or evidence-based review or evidence review* or evidence synthesis or hta or integrated literature review or integrated review or integrative literature review or integrative overview or integrative review or mapping review or meta analys* or metaanalys* or meta-ethnograph* or metaethnograph* or meta review or meta synthesis* or metasynthesis or	620270

	meta study or metastudy or methodologic overview* or methodologic review* or methodological overview* or methodological review* or ((mixed method* or mixed stud*) adj4 review) or overview of reviews or QES or (qualitative adj2 synthesis) or quantitative overview* or quantitative review or quantitative synthesis or rapid review or realist synthesis or (realist adj4 review) or research overview* or research synthesis or review of reviews or technology assessment* or scoping literature review or scoping review or (systematic adj4 review*) or systematic overview* or systemic review* or umbrella review*).ti,bt.	
Combined sets		
14.	*3 and 12 and 13*	*103*
Final result		
15.	**limit 14 to (danish or english or norwegian or swedish)**	**99**

The final search result, usually found at the end of the documentation, forms the list of abstracts.

.ab. = Abstract; .**ab,ti.** = Abstract or title; **.af.** = All fields; **.bt.** = Book title; **dt** = Create date; **exp** = Term from the Medline controlled vocabulary MeSH, including terms found below in the hierarchy; **.fs.** = Floating sub-heading, does not include terms found below this term in the MeSH hierarchy; **.kf.** = Author keyword; **.sh.** = Term from the Medline controlled vocabulary; **.ti.** = Title; **.xs.** = Floating sub-heading, includes terms found below this term in the MeSH hierarchy; **/** = Term from the Medline controlled vocabulary MeSH, but not including terms found below in the hierarchy; ***** = Focus (if found in front of a MeSH term); *** or $** = Truncation (if found at the end of a free text term); **.mp.** = Text, heading word, subject area node, title; **adjn** = Adjacency operator that retrieve records containing terms (in any order) within a specified number (n) of words; **?** = replaces one or no letters; **#** = replaces one letter

Database: International HTA Database

Interface:

Date of search: 17 March 2026

Note: *Search for systematic reviews*

Search terms		Items found
Low-value care		
1.	"Deprescriptions"[mh] OR "Health Services Misuse"[mh] OR "Inappropriate Prescribing"[mh] OR "Low-Value Care"[mh] OR "Medical Overuse"[mh] OR "Overtreatment"[mh] OR "Potentially Inappropriate Medication List"[mh] OR "Unnecessary Procedures"[mh]	46
2.	("low value" OR "lower value" OR "choosing wisely" OR "do not do" OR overdiagnosis OR overtreatment OR overuse OR abandon OR deinstitutionali* OR de-institutionali* OR deprescri* OR de-prescri* OR discontinue* OR dis-continue* OR inappropriate OR ineffective OR inefficient OR "no clinical benefit" OR obsolete OR outmoded OR overutili* OR reallocat* OR re-allocat* OR unnecessary OR wasteful)[Title]	21
Disinvestment		
3.	(deadopt* OR decommission* OR deimplement* OR deinvest* OR delist* OR disadopt* OR disinvest* OR "medical reversal" OR "health technology reassessment" OR "health technology re-assessment")[Title]	9
Combined sets		
4.	*#1 OR #2 OR #3*	68
Final result		
5.	***#1 OR #2 OR #3*** Limited to languages: Danish, English, Norwegian, Swedish	**37**

The final search result, usually found at the end of the documentation, forms the list of abstracts.

Database: Scopus

Interface: scopus.com

Date of search: 17 March 2026

Note: *Search for systematic reviews*

	Search terms	Items found
Population: Dentistry		
1.	TITLE-ABS-KEY("apical periodontitis" OR "apical surgery" OR "bone augment*" OR bruxism OR caries OR "craniofacial surgery" OR dental OR dentist* OR endodontic* OR exodontic* OR "fixed appliance" OR gingivt* OR jaw OR malocclusion OR "maxillofacial surgery" OR ((oral W/1 (crowns OR disease* OR disorder* OR fixture* OR health OR implant OR implants OR prosthesis OR status))) OR "oral surgery" OR orthodontic* OR "orthognatic surgery" OR orthopanthomogram OR osteitis OR pedodontic* OR periapical OR periradicular OR periodont* OR polpotomy OR "pulp capping" OR "pulp therapy" OR "pulp treatment" OR "pulpal necrosis" OR pulpectomy OR pulpitis OR prosthodontic* OR "removable appliance" OR "root canal" OR teeth OR temporomandibular OR tooth OR veneer*)	1,217,009
Low-value care		
2.	TITLE("low value") OR TITLE-ABS-KEY("choosing wisely" or "do not do" or overdiagnosis or overtreatment or overuse)	50,459
3.	TITLE-ABS-KEY((("low value" OR "low-value" OR "lower value" OR "lower-value") W/1 (care OR healthcare OR "health services" OR imaging)) OR ((abandon OR inappropriate OR ineffective OR inefficient OR "no clinical benefit" OR "no added value" OR "no value" OR obsolete OR outmoded OR unnecessary OR wasteful) W/0 (care OR "clinical practice*" OR "diagnostic imaging" OR examination* OR healthcare OR "health services" OR imaging OR intervention* OR "medical services" OR medication OR medicine OR order* OR practice* OR preoperative OR prescribing OR procedure* OR services OR technolog* OR test* OR testing OR therap* OR treat*)))	45,861
Medical waste		
4.	TITLE-ABS-KEY("hospital waste" OR "medical waste" OR "biomedical waste" OR "bio-medical waste" OR "healthcare waste" OR "health-care waste" OR "care waste")	10,662
Disinvestment		
5.	TITLE-ABS-KEY(deadopt* OR de-adopt* OR decommission* OR de-commission* OR deimplement* OR de-implement* OR deinvest* OR de-invest* OR delist* OR de-list* OR disadopt* OR dis-adopt* OR dis-invest* OR disinvest* OR "medical reversal" OR "health technology reassessment" OR "health technology re-assessment")	30,112
Additional terms for low-value care/disinvestment		
6.	TITLE(abandon OR appropriate* OR deinstitutionali* OR de-institutionali* OR deprescri* OR de-prescri* OR discontinue* OR dis-continue* OR inappropriate OR ineffective OR inefficient OR lower value OR "no clinical benefit" OR "no value" OR "no added value" OR obsolete OR outmoded OR overutili* OR reallocat* OR re-allocat* OR unnecessary OR wasteful)	2,372
7.	TITLE-ABS-KEY(("low value" OR "low-value" OR "lower value" OR "lower-value") W/1 (service* OR work))	383
Combined sets		
8.	#2 OR #3 OR #4 OR #5 OR #6 OR #7	135,991
Study types: systematic reviews and meta-analyses		
9.	INDEXTERMS("systematic review" OR "meta analysis" OR "biomedical technology assessment" OR "network meta-analysis" OR "technology assessment, biomedical") OR KEY("systematic review" OR "meta analysis" OR "health technology assessment") OR TITLE((comprehensive* W/3 review) OR "evidence-based review" OR "evidence review" OR "evidence synthesis" OR hta OR "integrated literature review" OR "integrated review" OR (integrative W/3 review) OR "integrative overview" OR "mapping review" OR meta-analy* OR metaanaly* OR meta-ethnography OR metaethnograph* OR meta-review OR "meta synthesis" OR metasynthesis OR "meta study" OR metastudy OR "methodological overview*" OR "methodologic overview*" OR "methodological review*" OR "methodologic review*" OR (("mixed method*" OR "mixed stud*") W/3 review) OR "overview of reviews" OR QES OR (qualitative W/1 synthesis) OR "quantitative overview*" OR "quantitative	950,867

	review" OR "quantitative synthesis" OR "rapid review" OR "realist synthesis" OR (realist W/3 review) OR "research overview*" OR "research synthesis" OR "review of reviews" OR "scoping literature review" OR "scoping review" OR "technology assessment*" OR (systematic* W/3 review*) OR "systematic overview*" OR "systemic review*" OR "umbrella review*")	
Final result		
10.	*#1 AND #8 AND #9*	*94*
11.	**#1 AND #8 AND #9**	**94**
	Limit to english	

The final search result, usually found at the end of the documentation, forms the list of abstracts.

TITLE-ABS-KEY = Title, abstract or keywords; ALL = All fields; PRE/n = "precedes by", i.e. the first term in the search must precede the second by a specified number of terms (n); W/n = "Within", i.e. the terms in the search must be within a specified number of terms (n) in any order; * = Truncation; " " = Quotation marks; searches for a exact phrase; ? = replaces one letter; LIMIT-TO (SRCTYPE, "j") = Limit to source type journal; LIMIT-TO (DOCTYPE, "ar") = Limit to document type article; LIMIT-TO (DOCTYPE, "re") = Limit to document type review

Database: Embase

Interface: embase.com

Date of search: 22 May 2026

Note: *Focused search for primary studies*

	Search terms	Items found
Population: Dentistry		
1.	'dentistry'/exp/mj OR 'dental procedure'/exp/mj OR 'biomedical and dental materials'/exp/mj OR 'mouth disease'/exp/mj OR 'dentist'/exp/mj OR 'jaw disease'/exp/mj OR 'dental device'/exp/mj	1,537,819
2.	'apical periodontitis':ti OR 'apical surgery':ti OR 'bone augment*':ti OR bruxism:ti OR caries:ti OR 'craniofacial surgery':ti OR dental:ti OR dentist*:ti OR endodontic*:ti OR exodontic*:ti OR 'fixed appliance':ti OR gingivt*:ti OR jaw:ti OR malocclusion:ti OR 'maxillofacial surgery':ti OR ((oral NEAR/2 (crowns OR disease* OR disorder* OR fixture* OR health OR implant OR implants OR prosthesis OR status)):ti) OR 'oral surgery':ti OR orthodontic*:ti OR 'orthognatic surgery':ti OR orthopanthomogram:ti OR osteitis:ti OR pedodontic*:ti OR periapical:ti OR periradicular:ti OR periodont*:ti OR polpotomy:ti OR 'pulp capping':ti OR 'pulp therapy':ti OR 'pulp treatment':ti OR 'pulpal necrosis':ti OR pulpectomy:ti OR pulpitis:ti OR prosthodontic*:ti OR 'removable appliance':ti OR 'root canal':ti OR teeth:ti OR temporomandibular:ti OR tooth:ti OR veneer*:ti	458,425
3.	#1 OR #2	1,698,745
Disinvestment		
4.	'deprescription'/mj OR 'disinvestment'/mj	2,287
5.	'choosing wisely':ti OR deadopt*:ti OR 'de adopt*':ti OR deimplement*:ti OR 'de implement*':ti OR deinvest*:ti OR 'de invest*':ti OR disadopt*:ti OR 'dis adopt*':ti OR 'dis invest*':ti OR disinvest*:ti OR 'do not do':ti	2,077
6.	abandon:ti OR decommission*:ti OR 'de commission*':ti OR deinstitutionali*:ti OR 'de institutionali*':ti OR delist*:ti OR 'de list*':ti OR deprescri*:ti OR 'de prescri*':ti OR discontinue*:ti OR 'dis continue*':ti OR 'medical reversal':ti OR 'technology reassessment':ti OR 'technology re-assessment':ti OR reallocat*:ti OR 're allocat*':ti	7,349
7.	'decrease* use':ti OR delearn*:ti OR 'de learn*':ti OR 'dis incent*':ti OR disincent*:ti OR 'evidence reversal':ti OR exnovat*:ti OR ((phas* NEAR/2 out):ti) OR relearn*:ti OR 're learn*':ti OR 'reversal of medical practice*':ti OR undiffus*:ti OR 'un diffus*':ti OR undo:ti OR 'un do':ti OR undoing:ti OR 'un doing':ti OR unlearn*:ti OR 'un learn*':ti	1,792
Combined sets		
8.	#4 OR #5 OR #6 OR #7	11,467
Combined sets		
9.	*#3 AND #8*	*88*
Final result		
10.	**#9 NOT ('clinical trial'/it OR 'conference abstract'/it) AND ([danish]/lim OR [english]/lim OR [norwegian]/lim OR [swedish]/lim) AND [2000-2026]/py**	**55**

The final search result, usually found at the end of the documentation, forms the list of abstracts.

/de = Term from the Emtree controlled vocabulary; **/exp** = Includes terms found below this term in the Emtree hierarchy; **/mj** = Major Topic; **:ab** = Abstract; **:au** = Author; /sd= Since date; **:kw** = Author keyword ; **:ti** = Article Title; **:ti,ab** = Title or abstract; ***** = Truncation; **' '** = Quotation marks; searches for an exact phrase; **NEAR/n** = Retrieves terms that are within "n" words of each other in either direction; **NEXT/n** = Requests terms that are within "n" words of each other in the order specified; **$** = replaces one or no letters; **?** = replaces one letter

Database: Medline

Interface: OvidSP

Date of search: 22 May 2026

Note: *Focused search for primary studies*

Search terms		Items found
Population: Dentistry		
1.	exp *"Biomedical and Dental Materials"/ or exp *Dental Facilities/ or exp *Dental Health Services/ or exp *Dentistry/ or exp *Dental Staff/ or *Oral Health/ or exp *Stomatognathic Diseases/	1235177
2.	(apical periodontitis or apical surgery or bone augment* or bruxism or caries or craniofacial surgery or dental or dentist* or endodontic* or exodontic* or fixed appliance or gingivt* or jaw or malocclusion or maxillofacial surgery or (oral adj2 (crowns or disease* or disorder* or fixture* or health or implant or implants or prosthesis or status)) or oral surgery or orthodontic* or orthognatic surgery or orthopanthomogram or osteitis or pedodontic* or periapical or periradicular or periodont* or polpotomy or pulp capping or pulp therapy or pulp treatment or pulpal necrosis or pulpectomy or pulpitis or prosthodontic* or removable appliance or root canal or teeth or temporomandibular or tooth or veneer*).ti,bt.	445591
3.	or/1-2	1388989
Disinvestment		
4.	*Deprescriptions/	1301
5.	("choosing wisely" or deadopt* or de-adopt* or deimplement* or de-implement* or deinvest* or de-invest* or disadopt* or dis-adopt* or dis-invest* or disinvest* or "do not do").ti,bt.	1511
6.	(abandon or decommission* or de-commission* or deinstitutionali* or de-institutionali* or delist* or de-list* or deprescri* or de-prescri* or discontinue* or dis-continue* or "medical reversal" or "technology reassessment" or "technology re-assessment" or reallocat* or re-allocat*).ti,bt.	5123
7.	("decrease* use" or delearn* or de-learn* or dis-incent* or disincent* or evidence reversal or exnovat* or (phas* adj2 out) or relearn* or re-learn* or "reversal of medical practice*" or undiffus* or un-diffus* or undo or un-do or undoing or un-doing or unlearn* or un-learn*).ti,bt.	1509
Combined sets		
8.	or/4-7	8319
Combined sets		
9.	*3 and 8*	*80*
10.	*limit 9 to (danish or english or norwegian or swedish)*	*73*
Final result		
11.	**limit 10 to yr="2000 -Current"**	**55**

The final search result, usually found at the end of the documentation, forms the list of abstracts.

.ab. = Abstract; .**ab,ti.** = Abstract or title; **.af.** = All fields; **.bt.** = Book title; **dt** = Create date; **exp** = Term from the Medline controlled vocabulary MeSH, including terms found below in the hierarchy; **.fs.** = Floating sub-heading, does not include terms found below this term in the MeSH hierarchy; **.kf.** = Author keyword; **.sh.** = Term from the Medline controlled vocabulary; **.ti.** = Title; **.xs.** = Floating sub-heading, includes terms found below this term in the MeSH hierarchy; **/** = Term from the Medline controlled vocabulary MeSH, but not including terms found below in the hierarchy; ***** = Focus (if found in front of a MeSH term); *** or $** = Truncation (if found at the end of a free text term); **.mp.** = Text, heading word, subject area node, title; **adjn** = Adjacency operator that retrieve records containing terms (in any order) within a specified number (n) of words; **?** = replaces one or no letters; **#** = replaces one letter

Database: Scopus

Interface: scopus.com

Date of search: 22 May 2026

Note: *Focused search for primary studies*

Search terms		Items found
Population: Dentistry		
1.	TITLE("apical periodontitis" OR "apical surgery" OR "bone augment*" OR bruxism OR caries OR "craniofacial surgery" OR dental OR dentist* OR endodontic* OR exodontic* OR "fixed appliance" OR gingivt* OR jaw OR malocclusion OR "maxillofacial surgery" OR ((oral W/1 (crowns OR disease* OR disorder* OR fixture* OR health OR implant OR implants OR prosthesis OR status))) OR "oral surgery" OR orthodontic* OR "orthognatic surgery" OR orthopanthomogram OR osteitis OR pedodontic* OR periapical OR periradicular OR periodont* OR polpotomy OR "pulp capping" OR "pulp therapy" OR "pulp treatment" OR "pulpal necrosis" OR pulpectomy OR pulpitis OR prosthodontic* OR "removable appliance" OR "root canal" OR teeth OR temporomandibular OR tooth OR veneer*)	543,316
Disinvestment		
2.	TITLE("choosing wisely" OR deadopt* OR de-adopt* OR deimplement* OR de-implement* OR deinvest* OR de-invest* OR disadopt* OR dis-adopt* OR dis-invest* OR disinvest* OR "do not do")	6,979
3.	TITLE(abandon OR decommission* OR de-commission* OR deimplement* OR de-implement* OR deinstitutionali* OR de-institutionali* OR delist* OR de-list* OR deprescri* OR de-prescri* OR discontinue* OR dis-continue* OR "medical reversal" OR reallocat* OR re-allocat* OR "technology reassessment" OR "technology re-assessment")	15,948
4.	TITLE("decrease* use" OR delearn* OR de-learn* OR dis-incent* OR disincent* OR "evidence reversal" OR exnovat* OR (phas* W/1 out) OR relearn* OR re-learn* OR "reversal of medical practice*" OR undiffus* OR un-diffus* OR undo OR un-do OR undoing OR un-doing OR unlearn* OR un-learn*)	7,410
Combined sets		
5.	#2 OR #3 OR #4	29,550
Combined sets		
6.	#1 AND #5	97
Final result		
7.	**#1 AND #5** **Limit to english, norwegian** **Publication year: 2000-2026**	**57**

The final search result, usually found at the end of the documentation, forms the list of abstracts.

TITLE-ABS-KEY = Title, abstract or keywords; ALL = All fields; PRE/n = "precedes by", i.e. the first term in the search must precede the second by a specified number of terms (n); W/n = "Within", i.e. the terms in the search must be within a specified number of terms (n) in any order; * = Truncation; " " = Quotation marks; searches for a exact phrase; ? = replaces one letter; LIMIT-TO (SRCTYPE, "j") = Limit to source type journal; LIMIT-TO (DOCTYPE, "ar") = Limit to document type article; LIMIT-TO (DOCTYPE, "re") = Limit to document type review

Complementary literature search

Undermind 22 may 2026

Full search query: I want to find primary quantitative, qualitative, and mixed-methods studies in dental practice that examine explicit de-implementation, de-adoption, or disinvestment interventions intended to reduce or stop inappropriate, low-value, unnecessary, or non-evidence-based clinical procedures, including interventions bundled with promotion of an alternative practice, as well as primary descriptive or attitudinal studies examining barriers, facilitators, and clinician or patient perspectives on why de-implementation succeeds or fails; excluding studies on medication deprescribing, including antibiotics and antibiotic stewardship

Search results:

Marshman Z, Kettle JE, Holmes RD, Cunningham KB, Freeman R, Gibson BJ, McColl E, Maguire A, Douglas GVA, Clarkson JE, Innes NPT. Dental professionals' experiences of managing children with carious lesions in their primary teeth - a qualitative study within the FiCTION randomised controlled trial. BMC Oral Health. 2020 Mar 4;20(1):64. doi: 10.1186/s12903-020-1051-7. PMID: 32131801; PMCID: PMC7057668.
100%
Reports a qualitative study of dentists' experiences delivering three caries management strategies (conventional, biological, prevention-alone).
Uses semi-structured interviews with 31 dental professionals from the FiCTION RCT and analyses data via a social practice theory framework. Relevant because it explores clinician attitudes and perceived barriers/facilitators to "doing less" (prevention-alone) and substituting conservative biological approaches, not medication deprescribing.

Jeggle LM, Baker SR, Schwendicke F. Changing dentists' carious tissue removal behavior: Qualitative study and behavioral change simulation experiment. J Dent. 2019 Feb;81:43-51. doi: 10.1016/j.jdent.2018.12.010. Epub 2018 Dec 21. PMID: 30579857.
100%
Tests interventions to change dentists' selective carious tissue removal (SE) behavior.
Uses qualitative interviews to design two interventions (Guideline summary; simulated removal Tool) and a large postal simulation experiment (n≈1,226 per arm) measuring intended dentin-removal depth before/after intervention. Relevant: explicit de-implementation-style aim (reduce invasive tissue removal), mixed qualitative+quantitative methods, measures behavioral intent (simulation) not real-world procedure rates or patient outcomes.

Schwendicke F, Foster Page LA, Smith LA, Fontana M, Thomson WM, Baker SR. To fill or not to fill: a qualitative cross-country study on dentists' decisions in managing non-cavitated proximal caries lesions. Implement Sci. 2018 Apr 6;13(1):54. doi: 10.1186/s13012-018-0744-7. PMID: 29625615; PMCID: PMC5889601.
100%
Identifies barriers and enablers influencing dentists' decisions to avoid restorations for non-cavitated proximal caries.
Uses semi-structured TDF-based interviews with 44 dentists across New Zealand, Germany, and Michigan (USA) to elicit themes. Relevant as a qualitative attitudinal study about de-implementation of restorative procedures (non-medication), but it examines intentions and influences rather than testing an intervention.

Kanzow P, Kanzow AF, Wiegand A, Schwendicke F. Implementation of repairs in dental practice: Randomized behavior simulation trial. J Am Dent Assoc. 2023 Jul;154(7):610-619.e11. doi: 10.1016/j.adaj.2023.04.007. Epub 2023 May 22. PMID: 37212760.
100%
Tests interventions to increase dentists' use of restorative repairs (de-implementation of full replacement).
Conducts interviews to design guideline and fee-item interventions, then a postal behavioral simulation RCT (vignettes) with German dentists (n=504 respondents). Relevant: explicitly aims to reduce unnecessary full replacements by promoting repairs (substitution strategy); outcomes are stated intentions in vignettes, not real-world procedure rates.

Kettle J, Marshman Z, Hamilton A, El-Yousfi S, Baker SR, Banerjee A, Deery C, Ramsay CR, Ricketts D, Clarkson JE. Dentists' perspectives on selective caries removal for the management of deep carious lesions in permanent teeth. BMC Oral Health. 2025 Mar 9;25(1):362. doi: 10.1186/s12903-025-05699-8. PMID: 40059145; PMCID: PMC11892160.
99%
Explores dentists' perspectives on selective (reduced) caries removal.
Uses 19 semi-structured interviews with SCRiPT trial dentists analysed via TDF and reflexive thematic analysis. Relevant as qualitative study of barriers, enablers, and contextual factors for de-implementation (reducing/withdrawing complete caries removal); excludes medication focus and explicitly addresses willingness to adopt less-invasive substitute.

Crisp J, Mihas P, Sanders AE, Divaris K, Wright JT. Influences on dentists' adoption of nonsurgical caries management techniques: A qualitative study. J Am Dent Assoc. 2021 Jun;152(6):463-470. doi: 10.1016/j.adaj.2020.10.001. Epub 2021 Jan 15. PMID: 33461729.
98%
Explores dentists' adoption of nonsurgical caries management techniques.
Uses semistructured qualitative interviews and thematic analysis of pediatric dentists in North Carolina. Relevant as an attitudinal/qualitative study on barriers/facilitators to "doing less" invasive care (fluoride varnish, SDF, Hall crowns); does not evaluate an intervention to reduce specific pre-existing procedures.

Gabel F, Kalmus O, Rosing K, Trescher AL, Listl S. Implementation of altered provider incentives for a more individual-risk-based assignment of dental recall intervals: evidence from a health systems reform in Denmark. Health Econ. 2020 Apr;29(4):475-488. doi: 10.1002/hec.3997. Epub 2020 Jan 26. PMID: 31984624.
97%
Analyzes effects of a policy reform changing dental recall–interval incentives.
Uses Danish national claims (2012–2016; ~72M claims, 3.76M patients) with interrupted time-series and patient fixed effects to compare pre/post changes in recall intervals and care composition. Relevant as a system-level de-implementation/substitution study of recall frequency (reducing >12-month recalls), but it targets incentive redesign for risk-based recall rather than explicitly framed “stop” of a named low-value procedure; excludes medications.

Grembowski D, Spiekerman C, del Aguila MA, Anderson M, Reynolds D, Ellersick A, Foster J, Choate L. Randomized pilot study to disseminate caries-control services in dentist offices. BMC Oral Health. 2006 May 3;6:7. doi: 10.1186/1472-6831-6-7. PMID: 16670027; PMCID: PMC1513219.
96%
Tests an intervention to increase preventive services (fluoride, sealants).
Randomized pilot: education plus fee-for-service payments versus control across 19 dental offices, tracked fluoride/sealant and restoration rates over 2 years. Relevant only partially: intervention promoted substitution toward preventive care and reports lower restoration rates, but primary aim was uptake of new services (implementation/substitution) rather than explicitly framed as de-implementation of low-value procedures; not about stopping specific inappropriate procedures or attitudes toward "doing less."

Hill H, Howarth E, Walsh T, Tickle M, Birch S, Brocklehurst P. The impact of changing provider remuneration on clinical activity and quality of care: Evaluation of a pilot NHS contract in Northern Ireland. Community Dent Oral Epidemiol. 2020 Oct;48(5):395-401. doi: 10.1111/cdoe.12544. Epub 2020 Jun 14. PMID: 32537831.
93%
Analyzes the effect of switching from fee-for-service to capitation on dental clinical activity.
Uses a difference-in-difference design comparing pilot NHS practices (capitation) to matched controls and patient surveys over a 1-year pilot and reversion. Relevant because it evaluates a system-level disincentive for high procedure volumes (reductions in treatment rates), but is not framed as explicit “de-implementation” of specific low-value procedures and excludes medication-focused targets.

Ortega-Verdugo P, Warren JJ, Gaeth GJ, Carter K, Kateeb E, Kolker JL, Shane DM. Assessing the Acceptability of Less Invasive Caries Removal Techniques for treating Deep Carious Lesions: A Conjoint Survey among Dentists Practicing in a Midwestern American State. Caries Res. 2023;57(3):243-254. doi: 10.1159/000533658. Epub 2023 Sep 12. PMID: 37699363.
90%
Assesses dentists' acceptability of less-invasive caries removal (SW/SE).
Uses a conjoint survey of 1,434 Iowa dentists with scenario attributes (lesion depth, dentin hardness, patient age) to quantify trade-offs. Relevant as an attitudinal/descriptive study about barriers to adopting "doing less" (24.9% would never use SW/SE); no intervention or measurement of actual reduction in procedures.

Full search query: I want to find primary quantitative and qualitative studies in dental practice on explicit de-implementation, de-adoption, or disinvestment strategies intended to stop the use of inappropriate, low-value, unnecessary, or non-evidence-based clinical procedures, including mixed interventions in which stopping low-value care is bundled with promoting an alternative, as well as primary studies examining barriers, facilitators, and clinician or patient perspectives related to stopping these procedures

Search results:

Gryczynski J, Mitchell SG, Asche SE, Truitt AR, Worley DC, Rindal DB. De-Implementing Opioids for Dental Extractions (DIODE): a multi-clinic, cluster-randomized trial of clinical decision support strategies in dentistry. Implement Sci. 2023 Feb 10;18(1):5. doi: 10.1186/s13012-023-01262-7. PMID: 36765414; PMCID: PMC9913004.
100%
Demonstrates a cluster-RCT testing clinical decision support to reduce opioid prescribing.

Randomized 49 dental providers across 22 clinics to CDS, CDS+patient education, or usual care; compared opioid prescriptions for 12,924 extractions pre/post. Relevant: explicit de-implementation target (opioid prescriptions) in routine dental practice with quantitative outcomes; measures prescribing reduction and includes patient-education arm—useful primary evidence on strategies to stop low-value medication use.

Goulao B, Scott C, Black I, Clarkson J, McArthur L, Ramsay C, Young L, Duncan E. Audit and feedback with or without training in-practice targeting antibiotic prescribing (TiPTAP): a study protocol of a cluster randomised trial in dental primary care. Implement Sci. 2021 Mar 30;16(1):32. doi: 10.1186/s13012-021-01098-z. PMID: 33781284; PMCID: PMC8007384.
100%
Tests a de-implementation strategy to reduce unnecessary dental antibiotic prescribing.
Compares audit-and-feedback alone versus audit-and-feedback plus theory-informed in-practice training (TiPTAP) in a cluster RCT of 228 NHS dental practices. Primary outcome is antibiotic items per 100 NHS treatment claims over 12 months; intervention explicitly aims to stop inappropriate antibiotic use (fits primary inclusion).

Rindal DB, Gryczynski J, Asche SE, Truitt AR, Kane SM, Worley DC, Mitchell SG. De-implementing opioid prescribing in a dental group practice: Lessons learned. Community Dent Oral Epidemiol. 2023 Feb;51(1):139-142. doi: 10.1111/cdoe.12820. Epub 2023 Feb 8. PMID: 36753410; PMCID: PMC9993482.
100%
Demonstrates a qualitative evaluation of an explicit opioid de-implementation trial in dentistry.
Interviews with 20 of 49 dental providers plus tracking of policy/social/environmental factors yielded lessons from a randomized CDS ± patient-education intervention to reduce post-extraction opioid prescribing. Relevant: primary-care dental setting, explicit de-implementation aim (reduce opioid prescribing), mixed intervention (CDS with/without patient education); contains clinician perspectives on barriers/facilitators and feedback/dashboard effects.

Löffler C, Böhmer F, Hornung A, Lang H, Burmeister U, Podbielski A, Wollny A, Kundt G, Altiner A. Dental care resistance prevention and antibiotic prescribing modification-the cluster-randomised controlled DREAM trial. Implement Sci. 2014 Feb 22;9:27. doi: 10.1186/1748-5908-9-27. PMID: 24559212; PMCID: PMC3936853.
100%
Implements a clustered RCT testing an educational intervention to reduce dentists' antibiotic prescribing.
Achieves this via a multifaceted small-group seminar (knowledge, communication training, interprofessional collaboration) versus control, with stratified cluster randomisation and baseline prescribing measurement. Relevant as an explicit de-implementation effort targeting reduction of a low-value/harmful practice (antibiotic overprescribing); quantitative outcomes expected—fits primary intervention studies on stopping inappropriate dental care.

Elouafkaoui P, Young L, Newlands R, Duncan EM, Elders A, Clarkson JE, Ramsay CR; Translation Research in a Dental Setting (TRiaDS) Research Methodology Group. An Audit and Feedback Intervention for Reducing Antibiotic Prescribing in General Dental Practice: The RAPiD Cluster Randomised Controlled Trial. PLoS Med. 2016 Aug 30;13(8):e1002115. doi: 10.1371/journal.pmed.1002115. PMID: 27575599; PMCID: PMC5004857.
100%
Demonstrates a cluster RCT testing an explicit de-implementation strategy to reduce antibiotic prescribing in dentistry.
Compares individualised audit-and-feedback (graphical A&F ± written behaviour-change message) versus control across 795 NHS dental practices using routine prescribing claims. Relevant: primary quantitative study in general dental practice with explicit aim to reduce a low-value/inappropriate intervention (antibiotic overprescribing); outcomes are prescribing rates.

Klevens M, Roberts R, Cumming M. Peer Comparison Intervention to Improve Antibiotic Prescribing in Dentistry. Infection Control & Hospital Epidemiology. 2020;41(S1):s345-s346. doi:10.1017/ice.2020.960
100%
Demonstrates a peer-comparison intervention to reduce dental antibiotic prescribing.
Sends letters to top 1% prescribers with benchmarking, guideline citations, and CE invitations; compares monthly prescriptions before/after versus controls. Primary quantitative intervention in dental practice explicitly aiming to reduce a named low-value behavior (inappropriate antibiotics); relevant outcome = prescribing rates; Medicaid dentists in Massachusetts.

Lim SWL, Awan DB, Maling TH (2022). A clinical audit and impact of interventions on antibiotic prescribing practices at a public dental primary care clinic. Arch Orofac Sci, 17(1): 31–45. https://doi.org/10.21315/aos2022.1701.OA01

100%
Demonstrates a de-implementation audit with interventions to reduce inappropriate antibiotic prescribing.
Compares two retrospective audit cycles (2018 vs 2019) and implemented CPD, feedback, and easier guideline access between cycles. Primary quantitative before–after data from a public dental primary-care clinic: prescriptions fell 30%; appropriateness improved modestly (+4.1%); dosing/duration inaccuracies mostly decreased.

Alqadi SF, Almuzaini SA, Algarni AA, Ayed Y, Alghamdi NS, Ain TS. The impact of clinical audit on antibiotic prescribing in dental practice at Taibah University Dental Hospital. J Clin Pediatr Dent. 2024 Sep;48(5):138-142. doi: 10.22514/jocpd.2024.113. Epub 2024 Sep 3. PMID: 39275831.
100%
Demonstrates a clinical-audit intervention reducing inappropriate antibiotic prescribing.
Compares retrospective prescribing data before/after an audit plus guideline dissemination and educational sessions, finding prescriptions fell 48% (119→58). Primary quantitative before–after study in a dental hospital setting; explicit aim to reduce inappropriate antibiotic use—meets de-implementation criteria (process outcome), but no long-term follow-up or qualitative exploration of barriers/facilitators reported.

Telang, Lahari Ajay; Nerali, Jayashri Tamanna1; Kalyan Chakravarthy, Pishipati Vinayak2; Siddiqui, Fawaz Shamim3; Telang, Ajay4. Antimicrobial Stewardship – Implementation and Improvements in Antibiotic-Prescribing Practices in a Dental School. Archives of Medicine and Health Sciences 9(1):p 80-86, Jan–Jun 2021. | DOI: 10.4103/amhs.amhs_20_21
100%
Demonstrates a targeted antimicrobial stewardship intervention to reduce inappropriate antibiotic prescribing in a dental school.
Implements baseline retrospective audit, an educational workshop for faculty, pre/post questionnaires, and prospective audits at 6 months and 1 year to measure change. Primary quantitative (prescription audits) and pre/post survey data; intervention explicitly aims to reduce inappropriate antibiotic use (de-implementation of low-value prescribing), conducted in a dental education/practice setting.

Teoh L, Stewart K, Marino RJ, McCullough MJ. Improvement of dental prescribing practices using education and a prescribing tool: A pilot intervention study. Br J Clin Pharmacol. 2021 Jan;87(1):152-162. doi: 10.1111/bcp.14373. Epub 2020 Jun 26. PMID: 32436349.
100%
Demonstrates a pilot de-implementation intervention to reduce inappropriate dental antibiotic prescribing.
Tests a multimodal approach (education + a dentistry-specific prescribing website/tool) and measures impact on prescribing behavior. Primary quantitative pilot in dental practice targeting reduction of a named low-value/harmful practice (inappropriate antibiotics); suitable as an explicit de-implementation study though pilot scale and outcome details (effect size, follow-up, setting) should be checked.