

Supplementary Online Content

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eTable 1. MEDLINE Search (via PubMed)

Search No.	Facet	Search Terms	Search Results (October 3, 2018)
1	Find studies regarding physicians	Search physician*[tiab]	357,549
2	Find studies regarding burnout and stress	Search burnout, professional[MeSH]	9,912
3		Search (("burnout" OR "job stress" OR "work engagement" OR "psychosocial factors" OR "health outcomes" OR "work behaviors" OR "job performance" OR "job satisfaction" OR "job-person fit" OR "organizational factors" OR "quadruple aim"))	93,009
4		Search stress	814,346
5		Search ((#2 OR #3 OR #4))	890,903
6		Find studies regarding physicians and burnout or stress	Search ((#1 AND #5))
7	Find studies regarding workflow interventions	Search work flow[MeSH Terms]	3,311
8		Search (("work flow"[tiab] OR workflow[tiab]))	15,246
9		Search ((time and motion studies[MeSH Terms]))	4,198
10		Search ((#7 OR #8 OR #9))	20,809
11	Find studies regarding physicians and burnout and workflow interventions	Search ((#6 AND #10))	74

eTable 2. Cochrane Library Search

Search No.	Facet	Search Terms	Search Results (October 3, 2018)
1	Find articles on physicians	Physician*	37,421
2	Find articles on burnout or job performance	Burnout, Professional [MeSH]	186
3		Burnout OR "job stress" OR "work engagement" OR "psychosocial factors" OR "health outcomes" OR "work behaviors" OR "job performance" OR "job satisfaction" OR "job-person fit" OR "organizational factors" OR stress	48,759
4		#2 OR #3	48,759
5		Combine articles on physicians and burnout	#1 AND #4
6	Find articles on workflow	Workflow [MeSH]	46
7		"Work flow" OR "workflow" OR "time and motion studies"	744
8		Time and Motion Studies [MeSH]	123
9		#6 OR #7 OR #8	744
10	Combine articles on physician burnout and workflow	#5 AND #9	17

eTable 3. EMBASE Search

Search No.	Facet	Search Terms	Search Results (October 3, 2018)
1	Find articles on physicians	'physician'/exp OR 'physicians':ab,ti	862,826
2	Find articles on job burnout	'burnout'/exp OR 'burnout':ab,ti OR 'job stress'/exp OR 'job stress':ab,ti OR 'work engagement'/exp OR 'work engagement':ab,ti OR 'psychosocial factors'/exp OR 'psychosocial factors':ab,ti OR 'health outcomes'/exp OR 'health outcomes':ab,ti OR 'job performance'/exp OR 'job performance':ab,ti OR 'job satisfaction'/exp OR 'job satisfaction':ab,ti OR 'stress'/exp OR 'stress':ab,ti OR 'work behavior':ab,ti OR 'job-person fit':ab,ti OR 'organizational factors':ab,ti	1,015,043
3	Find articles on physicians and burnout	#1 AND #2	33,047
4	Find articles on workflow	'workflow'/exp OR 'workflow':ab,ti OR 'work flow':ab,ti OR 'task performance'/exp OR 'time and motion studies':ab,ti	161,572
5	Combine articles on physicians' burnout and workflow	#3 AND #4	389
6	Find and limit conference abstracts to last three years	[conference abstract]/lim NOT [2017-2018]/py	2,597,920
7		#5 NOT #6	326

eTable 4. Additional MEDLINE Search (via PubMed) with “Lean”

Search No.	Facet	Search Terms	Search Results (October 3, 2018)
1	Find studies regarding physicians	Search physician*[tiab]	357,549
2	Find studies regarding burnout and stress	Search burnout, professional[MeSH]	9,912
3		Search (("burnout" OR "job stress" OR "work engagement" OR "psychosocial factors" OR "health outcomes" OR "work behaviors" OR "job performance" OR "job satisfaction" OR "job-person fit" OR "organizational factors" OR "quadruple aim"))	93,009
4		Search stress	814,346
5		Search ((#2 OR #3 OR #4))	890,903
6		Find studies regarding physicians and burnout or stress	Search ((#1 AND #5))
7	Find studies regarding workflow interventions	Search work flow[MeSH Terms]	3,311
8		Search (("work flow"[tiab] OR workflow[tiab]))	15,246
9		Search ((time and motion studies[MeSH Terms]))	4,198
10		Search ((#7 OR #8 OR #9))	20,809
11	Find studies regarding Lean interventions, excluding other workflow interventions	Search (lean NOT #10)	35,392
12	Find studies regarding physicians, burnout and Lean interventions	Search (#6 AND #11)	13

eTable 5. Additional Cochrane Library Search with “Lean”

Search no.	Facet	Search Terms	Search Results (October 3, 2018)
1	Find articles on physicians	'physician'/exp OR 'physician*':ab,ti	879,438
2	Find articles on job burnout	'burnout' OR 'job stress' OR 'work engagement' OR 'psychosocial factors' OR 'health outcomes' OR 'job performance' OR 'job satisfaction' OR 'work behavior*' OR 'job-person fit' OR 'organizational factors' OR 'quadruple aim'	124,809
3		Stress	1,043,526
4		'professional burnout' OR 'burnout'/exp	12,688
5		#2 OR #3 OR #4	1,143,835
6		Find articles on physicians and burnout	#1 AND #5
7	Find articles on workflow	'workflow'/exp	12,182
8		'workflow':ti,ab OR 'work flow':ti,ab	19,356
9		'time and motion studies':ti,ab OR 'task performance'/exp	130,822
10		#7 OR #8 OR #9	152,627
11	Find articles on 'Lean' not in other articles about 'workflow'	'lean' NOT #10	49,633
12	Combine article on physicians and burnout with 'Lean' not in other articles about 'workflow'	#6 AND #11	47

eTable 6. Additional Embase Search with “Lean”

Search no.	Facet	Search Terms	Search Results (October 3, 2018)
1	Find articles on physicians	Physician*	37,421
2	Find articles on job burnout	“Burnout, professional” [MeSH]	186
3		“burnout” OR “job stress” OR “work engagement” OR “psychosocial factors” OR “health outcomes” OR “work behaviors” OR “job performance” OR “job satisfaction” OR “job-person fit” OR “organizational factors” OR “quadruple aim”	7,478
4		Stress	42,766
5		#2 OR #3 OR #4	48,759
6		Find articles on physicians and job burnout	#1 AND #5
7	Find articles on workflow	“workflow”[MeSH]	46
8		“work flow” OR “workflow”	628
9		“Time and Motion Studies” [MeSH]	123
10		#7 OR #8 OR #9	742
11	Find articles on “lean”	“lean”	5,774
12	Find articles on ‘Lean’ not in other articles about ‘workflow’	#11 NOT #10	5,768
13	Combine article on physicians and burnout with ‘Lean’ not in other articles about ‘workflow’	#6 AND #12	41

eTable 7. Supplemental Searches

The following conferences and websites of relevant organizations were also searched. Manual searches of bibliographies were also performed to identify additional relevant articles.

Conference (Year(s))	Relevant Organizations
WELL-Med Conference (2014, 2016, and 2018)	Agency for Healthcare Research and Quality
American Conference on Physician Health (2017, 2018)	American Medical Association
International Conference on Physician Health (2016)	American College of Physicians
	Institute for Healthcare Improvement

eTable 8. Inclusion/Exclusion Criteria for the Systematic Searches

Inclusion	Exclusion
The publication reports on organization-directed interventions for physician burnout that are related to work, the workplace, or workflow.	The publication does not report on organization-directed interventions for physician burnout that are related to work, the workplace, or workflow.
The publication pertains to physicians (including medical specialties classified according to surgical or internal medicine, age range of patients, diagnostic or therapeutic, and organ-based or technique-based specialists).	The publication does not pertain to physicians or pertains to non-physician healthcare professionals (e.g. nurses, assistants, trainees, caregivers at nursing homes, etc.).
The publication is dated within the last 11 years (2007 – 2018).	The publication is older than the last 11 years (2007 – 2018).
The publication is in English.	The publication is not in English.
The publication reports a primary study, systematic review, or meta-analysis.	The publication reports a narrative (non-systematic) review, case report, or case series.
The publication contains an abstract.	The publication does not contain an abstract.