Description of the Literature Search Process

The database searches were initially run on April 3, 2019 and rerun on May 7, 2020 in Ovid MEDLINE databases, Embase.com, CINAHL via EBSCOhost, and Clarivate Web of Science. The search optimizes sensitivity and specificity. First, it forces the surgeons mesh term to appear with one of the study's measures. Second, it does a targeted title search of surgeon and key measure terminology. However, when we broaden to the abstract field we employ a proximity operator and expand the measures. These concessions were made to minimize false hits and reduce the otherwise enormous result set to something manageable. Third, the search retrieves any article that mentions second victim, as this is often aligned with the surgical context, but doesn't retrieve many results. Fourth, we used a narrower proximity for the surgeon / stress concept, as stress more broadly searched increases retrieval substantially and disproportionately. Fifth, we include the burnout scale Fifth, we run a physician search to get the few studies that use physician terminology in the title, but have surgeon-related information in the body. The main limitation is that studies with surgeon-related data as part of subgroup analyses may be missed. Conference abstracts were excluded from the Embase and Web of Science searches. There were no other exclusions incorporated into the searches.

Ovid MEDLINE; Ovid Epub Ahead of Print; Ovid In-Process & Other Non-Indexed Citations; Ovid Daily and Versions (1519 results on April 3, 2019; 1863 results on May 7, 2020)
(exp surgeons/ and (exp anxiety/ or exp anxiety disorders/ or depression/ or family relations/ or fatigue/ or job satisfaction/ or exp personality/ or quality of life/ or self care/ or exp social support/ or exp stress, psychological/ or exp suicide/)) or (((neurosurgeon* or surgeon* or surgical specialt*) and (burnout* or burn* out or distress* or moral* or well-being or wellbeing or wellness)).ti or ((neurosurgeon* or surgeon* or surgical specialt*) adj5 (anxiety or burnout* or burn* out or conscience or cope or coping or cynic* or depersonali* or depress* or distress* or emotion* or exhaustion or fatigue* or grief or griev* or moral* or quality of life or resilien* or self care or suicide* or well-being or wellbeing or wellness)).tw,kw or second victim*.tw,kw or ((neurosurgeon* or surgeon*) adj3 stress*).tw,kw) or ((neurosurgeon* or surgeon*) and maslach).tw,kw or (((doctor* or physician*) and (burnout* or burn* out or distress* or well-being or wellbeing or wellness)).ti and (exp surgeons/ or neurosurgeon*.tw,kw or surgeon*.tw,kw or surgical specialt*.tw,kw))

Elsevier Embase (1577 results on April 3, 2019; 1764 results on May 7, 2020)
('surgeon'/exp/mj AND ('anxiety'/de OR 'anxiety disorder'/exp OR 'coping behavior'/exp OR 'depression'/exp/mj OR 'family conflict'/de OR 'family relation'/de OR 'fatigue'/mj OR 'job satisfaction'/de OR 'performance anxiety'/de OR 'personality'/exp/mj OR 'quality of life'/mj OR 'self care'/exp OR 'social support'/mj OR 'stress'/exp/mj OR 'suicide'/de OR 'wellbeing'/exp) OR ((neurosurgeon*:ti OR surgeon*:ti OR 'surgical specialties':ti OR 'surgical specialty':ti) AND (burnout*:ti OR 'burn out':ti OR 'burned out':ti OR distress*:ti OR moral*:ti OR 'well-being':ti OR wellbeing:ti OR wellness:ti)) OR (((neurosurgeon* OR surgeon* OR 'surgical specialties' OR 'surgical specialty') NEAR/5 (anxiety OR burnout* OR 'burn out' OR 'burned out' OR conscience

OR cope OR coping OR cynic* OR depersonali* OR depress* OR distress* OR emotion* OR exhaustion OR fatigue* OR grief OR griev* OR moral* OR 'quality of life' OR resilien* OR 'self care' OR suicide* OR 'well-being' OR wellbeing OR wellness)):ti,ab,kw) OR 'second victim':ti,ab,kw OR 'second victims':ti,ab,kw OR (((neurosurgeon* OR surgeon*) NEAR/3 stress*):ti,ab,kw) OR ((neurosurgeon*:ti,ab,kw OR surgeon*:ti,ab,kw) AND maslach:ti,ab,kw) OR ((doctor*:ti OR physician*:ti) AND (burnout*:ti OR 'burn out':ti OR 'burned out':ti OR distress*:ti OR 'well-being':ti OR wellbeing:ti OR wellness:ti) AND ('surgeon'/exp OR neurosurgeon*:ti,ab,kw OR surgeon*:ti,ab,kw OR 'surgical specialties':ti,ab,kw OR 'surgical specialty':ti,ab,kw))) NOT ('conference abstract':it OR 'conference paper':it OR 'conference review':it)

EBSCOhost CINAHL (875 results on April 3, 2019; 1174 results on May 7, 2020)
(MH Surgeons AND MH ("Anxiety+" OR "Anxiety Disorders+" OR Depression+ OR "Family Conflict" OR "Family Relations" OR Fatigue+ OR "Job Satisfaction+" OR Personality+ OR "Quality of Life+" OR "Self Care" OR Stress+ OR Suicide+)) OR (TI (((neurosurgeon* OR surgeon* OR "surgical specialties" OR "surgical specialty") AND (burnout* OR "burn out" OR "burned out" OR distress* OR moral* OR "well-being" OR wellbeing OR wellness))) OR TI (((neurosurgeon* OR surgeon* OR "surgical specialties" OR "surgical specialty") N5 (anxiety OR burnout* OR "burn out" OR "burned out" OR conscience OR cope OR coping OR cynic* OR depersonali* OR depress* OR distress* OR emotion* OR exhaustion OR fatigue* OR grief OR griev* OR moral* OR "quality of life" OR resilien* OR "self care" OR suicide* OR "well-being" OR wellbeing OR wellness))) OR AB (((neurosurgeon* OR surgeon* OR "surgical specialties" OR "surgical specialty") N5 (anxiety OR burnout* OR "burn out" OR "burned out" OR conscience OR cynic* OR depersonali* OR depress* OR distress* OR emotion* OR exhaustion OR fatigue* OR grief OR griev* OR moral* OR "quality of life" OR "self care" OR suicide* OR "well-being" OR wellbeing OR wellness))) OR TI ("second victim" OR "second victims" OR ((neurosurgeon* OR surgeon*) N3 stress*)) OR AB ("second victim" OR "second victims" OR ((neurosurgeon* OR surgeon*) N3 stress*)) OR TI (((neurosurgeon* OR surgeon*) AND maslach)) OR AB (((neurosurgeon* OR surgeon*) AND maslach)) OR TI (((doctor* OR physician*) AND (burnout* OR "burn out" OR "burned out" OR distress* OR "well-being" OR wellbeing OR wellness) AND (neurosurgeon* OR surgeon* OR "surgical specialties" OR "surgical specialty"))) OR AB (((doctor* OR physician*) AND (burnout* OR "burn out" OR "burned out" OR distress* OR "well-being" OR wellbeing OR wellness) AND (neurosurgeon* OR surgeon* OR "surgical specialties" OR "surgical specialty"))))

Clarivate Web of Science (1398 results on April 3, 2019; 1569 results on May 7, 2020)
TI=(((neurosurgeon* OR surgeon* OR "surgical specialties" OR "surgical specialty") AND (burnout* OR "burn out" OR "burned out" OR distress* OR moral* OR "well-being" OR wellbeing OR wellness))) OR TS=(((neurosurgeon* OR surgeon* OR "surgical specialties" OR "surgical specialty") NEAR/5 (anxiety OR burnout* OR "burn out" OR "burned out" OR conscience OR cope OR coping OR cynic* OR depersonali* OR depress* OR distress* OR emotion* OR exhaustion OR fatigue* OR grief OR griev* OR moral* OR "quality of life" OR resilien* OR "self care" OR suicide* OR "well-being" OR wellbeing OR wellness))) OR TS=("second victim" OR "second victims" OR ((neurosurgeon* OR surgeon*) NEAR/3 stress*)) OR TS=(((neurosurgeon* OR surgeon*) AND maslach)) OR TS=(((doctor* OR physician*) AND

(burnout* OR "burn out" OR "burned out" OR distress* OR "well-being" OR wellbeing OR wellness) AND (neurosurgeon* OR surgeon* OR "surgical specialties" OR "surgical specialty")))
Refined by: [excluding] DOCUMENT TYPES: (BOOK REVIEW OR PROCEEDINGS PAPER OR MEETING ABSTRACT OR NEWS ITEM)
Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED
Timespan=All years