**Search Strategy Report: Original Search**

**Topic:**

* KQ1: What are the outcomes of interventions to enhance family caregiver acts of caring and support in the ICU?
* KQ 2: What are the functions and forms of these interventions?

**Running title:** “Outcomes and core functions of complex interventions to promote family caregiver support of patients in adult, pediatric, and neonatal ICUs: A systematic review”.

**Searcher:** Lesley Skalla, PhD, MSLS, Duke University Medical Center Library & Archives, Duke University School of Medicine

**Translations done by** Erin Simon, Duke University Medical Center Library & Archives, Duke University School of Medicine

**Peer reviewer:** Sarah Cantrell, MLIS, AHIP, Duke University Medical Center Library & Archives, Duke University School of Medicine (**Date:** 2/9/2024)

**Databases searched:** MEDLINE(via Ovid), Embase (Elsevier), and CINAHL (EBSCOhost)

**Search date:** 2/16/2024

**Notes:**

* Imported 3329 citations into EndNote from MEDLINE OVID
* Imported 4359 records into EndNote from EMBASE
* Imported 3308 records into EndNote from CINAHL
* Total of 10996 records imported into EndNote.
* Covidence **removed 4558 records** leaving **6438** unique records to screen.

**Database (including vendor/platform):** MEDLINE (via Ovid)

**Search run: 2/16/2024**

|  |  |  |
| --- | --- | --- |
| Steps | Search String | Results |
| 1. Family (added exp to family/) | exp family/ or exp Nuclear Family/ or Extended Family/ or exp friends/ or family relations/ or exp adult children/ or exp family characteristics/ or exp sibling relations/ or exp spouses/ or exp siblings/ or exp Mothers/ or exp Fathers/ or exp Parents/ or exp community support/ or exp family support/ or (family or families or relative or relatives or spouse or spouses or spousal or partner or partners or husband or husbands or wife or wives or "adult child" or "adult children" or "adult daughter" or "adult daughters" or "adult son" or "adult sons" or sibling or siblings or sister or sisters or stepsister or stepsisters or brother or brothers or stepbrother or stepbrothers or aunt or aunts or uncle or uncles or cousin or cousins or friend or friends or neighbor or neighbors or neighbour or neighbours or "significant other" or "significant others" or "next of kin" or boyfriend or boyfriends or girlfriend or girlfriends or mother or mothers or father or fathers or parent or parents).ti,ab,kf. or ((medical or health or healthcare) adj2 (proxy or proxies or surrogate or surrogates or surrogacy)).ti,ab,kf. | 3040182 |
| 2.      Informal Caregivers | exp caregivers/ and (informal or informally or nonprofessional or non-professional or non-clinical or nonclinical or unpaid).ti,ab,kf. | 6497 |
| 3.       Informal Caregivers | ((informal or informally or nonprofessional or non-professional or non-clinical or nonclinical or unpaid) adj5 ("care giver" or "care givers" or caregiver or caregivers or caregiving or caretaker or caretakers or "care taker" or "care takers" or carer or carers or careworker or careworkers or "care worker" or "care workers" or "support person" or "support persons" or "support people")).ti,ab,kf. or ("lay caregiver" or "lay caregivers" or "lay carer" or "lay carers").ti,ab,kf. or ((patient or patients or hospital) adj3 (visitor or visitors or guardian or guardians or companion or companions)).ti,ab,kf. | 10815 |
| 4.      combined | 1 or 2 or 3 | 3046238 |
| 5.      ICU/intensive care/critical care including NICUs and PICUs | exp Intensive Care Units/ or exp Critical Care/ or exp critical illness/ or (ICU\* or NICU\*  or PICU\* or "intensive care" or "critical care" or "seriously ill" or "critically ill" or "serious illness\*" or "critical illness\*" or "septic shock\*" or "severe sepsis\*" or "mechanical vent\*" or "mechanically vent\*").ti,ab,kf. or ((pre-term or preterm or prematur\*) adj3 (infant\* or neonat\* or bab\* or newborn\*)).ti,ab,kf. | 478312 |
| 1. General family centered support interventions (also covers Participating in direct patient care partnership in care (empowerment and involvement in care); | (((family-centered or family-centred or "family centered" or "family centred" or family-integrated or "family integrated" or family-member\* or "family member\*" or family-focused or "family focused" or family-participatory or "family participatory") adj3 (care or caring or intervention\* or strateg\* or support or program\* OR approach\*)) or ((Family or families or caregiver\* or "care giver\*" or carer\* or relative\* or parent\* or mother\* or father\* or maternal or maternally or paternal or paternally or spous\* or partner\*) adj3 (intervention\* or involv\* or participat\* or engag\* or empower\* or support\* or visit\* or call\* or presence))).ti,ab,kf. | 167335 |
| 1. Specific family facing patient interventions: ICU diaries | ((diary or diaries or journal or journals or journaling or writing) adj7 ("intensive care unit\*" or ICU\* or PICU\* or NICU\*)).ti,ab,kf. | 275 |
| 8. Combined | 6 OR 7 | 167546 |
| * 1. VA ESP and EPOC filter: Mesh terms | ("Randomized Controlled Trial" or "Controlled Clinical Trial" or "Clinical Trial" or "Observational Study" or "Evaluation Studies" or "Comparative Study").pt. | 2797745 |
| * 1. VA ESP and EPOC filter: rct or quasi keywords | (randomized OR randomised OR randomization OR randomisation OR placebo OR randomly OR trial OR trials OR groups  OR "evaluation study" OR "evaluation studies" OR "intervention study" OR "intervention studies" OR longitudinal OR longitudinally OR prospective OR prospectively OR follow-up OR "follow up" OR followup OR cross-sectional OR "cross sectional" OR "comparative study" OR "comparative studies" OR nonrandom OR "non-random" OR nonrandomized OR "non-randomized" OR nonrandomised OR "non-randomised" OR quasi-experiment\* OR quazi-experiment\* OR quasiexperiment\* OR quaziexperiment\* OR quasirandom\* OR quazirandom\* OR quasi-random\* OR quazi-random\* OR quasi-control\* OR quazi-control\* OR quasicontrol\* OR quazicontrol\*).ti,ab. | 6188317 |
| * 1. VA ESP and EPOC filter : controlled trial or study keywords | controlled.ti,ab. AND (trial OR study).ti,ab. | 589073 |
| * 1. VA ESP and EPOC filter: pre-post keywords | ("pre-post" OR "pre post" OR "posttest" OR "post-test" OR "post test" OR pretest OR "pre-test" OR "pre test" OR "repeated measure" OR "repeated measures").ti,ab. | 101875 |
| * 1. VA ESP and EPOC filter: before and after keywords | ((before and after) or (before and during)).ti,ab. | 1086578 |
| * 1. VA ESP and EPOC filter: interrupted time series keywords | ("time series" and interrupt\*).ti,ab. | 6346 |
| * 1. VA ESP and EPOC filter: multiple time points keywords | "time points".ti,ab. AND (multiple OR one OR two OR three OR four OR five OR six OR seven OR eight OR nine OR ten OR month OR monthly OR day OR daily OR week OR weekly OR hour OR hourly).ti,ab. | 89171 |
| * 1. VA ESP and EPOC filter combined | 9 OR 10 OR 11 OR 12 OR 13 OR 14 OR 15 | 8451673 |
| * 1. All concepts Combined | 4 and 5 and 8 and 16 | 3387 |
| 18. Remove case reports/editorials | 17 not (case reports OR editorial OR letter OR comment OR congress).pt. | 3334 |
| 1. Remove non- human articles | 18 not (exp animals/ not exp humans/) | 3329 |
| Original example articles | ("25738051" or "29871689" or "31005676" or "25758633" or "26900776" or "32380505" or "29627395" or "28667715" or "24063360" or "29731406" or "31310299" or "36209358" or "33880701" or "36528458" or "30795978" or "31310297" or "33870915" or "33284144" or "24335446" or "36731263" or "36721277" or "33052404" or "37161268" or "30554939" or "33827833").ui. | 25/25 |
| Additional example articles skimming new search results | ("38195443" or "36443851" or "32154317" or "37908419" or "37761780" or "35928538").ui. | 6/6 |
| Additional example articles from McAndrew review | (“17043133” or “18034178” or “19880956” or “23072502” or “25247740” or “21859919” or “20234207” or “25724391” or “21214624” or “25486375” or “28412958” or “22813358” or “29746269” or “16466358” or “17937685” or “26603213” or “25803213”).ui. | 16/17  21214624 not retrieved because it is a comparative time series/case control study. |

* Imported 3329 citations into EndNote

**Database:** Embase (Elsevier)

Date: 2/16/2024

|  |  |  |
| --- | --- | --- |
| Steps | Search String | Results |
| 1. Family | family/de OR 'Nuclear Family'/de OR 'Extended Family'/de OR friend/de OR 'family relation'/de OR 'adult child'/de OR 'family structure'/de OR 'sibling relation'/exp OR spouse/exp OR sibling/exp OR Mother/de OR Father/de OR Parent/exp OR 'community support'/de OR 'family support'/de OR family:ti,ab OR families:ti,ab OR relative:ti,ab OR relatives:ti,ab OR spouse:ti,ab OR spouses:ti,ab OR spousal:ti,ab OR partner:ti,ab OR partners:ti,ab OR husband:ti,ab OR husbands:ti,ab OR wife:ti,ab OR wives:ti,ab OR 'adult child':ti,ab OR 'adult children':ti,ab OR 'adult daughter':ti,ab OR 'adult daughters':ti,ab OR 'adult son':ti,ab OR 'adult sons':ti,ab OR sibling:ti,ab OR siblings:ti,ab OR sister:ti,ab OR sisters:ti,ab OR stepsister:ti,ab OR stepsisters:ti,ab OR brother:ti,ab OR brothers:ti,ab OR stepbrother:ti,ab OR stepbrothers:ti,ab OR aunt:ti,ab OR aunts:ti,ab OR uncle:ti,ab OR uncles:ti,ab OR cousin:ti,ab OR cousins:ti,ab OR friend:ti,ab OR friends:ti,ab OR neighbor:ti,ab OR neighbors:ti,ab OR neighbour:ti,ab OR neighbours:ti,ab OR 'significant other':ti,ab OR 'significant others':ti,ab OR 'next of kin':ti,ab OR boyfriend:ti,ab OR boyfriends:ti,ab OR girlfriend:ti,ab OR girlfriends:ti,ab OR mother:ti,ab OR mothers:ti,ab OR father:ti,ab OR fathers:ti,ab OR parent:ti,ab OR parents:ti,ab OR ((medical OR health OR healthcare ) NEAR/2 (proxy OR proxies OR surrogate OR surrogates OR surrogacy )):ti,ab | 3,833,486 |
| 2.      Informal Caregivers | caregiver/exp AND (informal:ti,ab OR informally:ti,ab OR nonprofessional:ti,ab OR non-professional:ti,ab OR non-clinical:ti,ab OR nonclinical:ti,ab OR unpaid:ti,ab ) | 8,688 |
| 3.       Informal Caregivers | ((informal OR informally OR nonprofessional OR non-professional OR non-clinical OR nonclinical OR unpaid ) NEAR/5 ('care giver' OR 'care givers' OR caregiver OR caregivers OR caregiving OR caretaker OR caretakers OR 'care taker' OR 'care takers' OR carer OR carers OR careworker OR careworkers OR 'care worker' OR 'care workers' OR 'support person' OR 'support persons' OR 'support people' )):ti,ab OR ('lay caregiver' OR 'lay caregivers' OR 'lay carer' OR 'lay carers' ):ti,ab OR ((patient OR patients OR hospital ) NEAR/3 (visitor OR visitors OR guardian OR guardians OR companion OR companions )):ti,ab | 13,950 |
| 4.      combined | #1 OR #2 OR #3 | 3,841,672 |
| 5.      ICU/intensive care/critical care including NICUs and PICUs | 'Intensive Care Unit'/exp OR 'intensive Care'/exp OR 'critical illness'/exp OR ICU\*:ti,ab OR NICU\*:ti,ab OR PICU\*:ti,ab OR 'intensive care':ti,ab OR 'critical care':ti,ab OR 'seriously ill':ti,ab OR 'critically ill':ti,ab OR 'serious illness\*':ti,ab OR 'critical illness\*':ti,ab OR 'septic shock\*':ti,ab OR 'severe sepsis\*':ti,ab OR 'mechanical vent\*':ti,ab OR 'mechanically vent\*':ti,ab OR ((pre-term OR preterm OR prematur\*) NEAR/3 (infant\* OR neonat\* OR bab\* OR newborn\*)):ti,ab | 1,389,664 |
| 6. General family centered support interventions (also covers Participating in direct patient care partnership in care (empowerment and involvement in care); | (((family-centered OR family-centred OR 'family centered' OR 'family centred' OR family-integrated OR 'family integrated' OR family-member\* OR 'family member\*' OR family-focused OR 'family focused' OR family-participatory OR 'family participatory') NEAR/3 (care OR caring OR intervention\* OR strateg\* OR support OR program\* OR approach\*)) OR ((Family OR families OR caregiver\* OR 'care giver\*' OR carer\* OR relative\* OR parent\* OR mother\* OR father\* OR maternal OR maternally OR paternal OR paternally OR spous\* OR partner\*) NEAR/3 (intervention\* OR involv\* OR participat\* OR engag\* OR empower\* OR support\* OR visit\* OR call\* OR presence))):ti,ab | 214,845 |
| 7. Specific family facing patient interventions: ICU diaries | ((diary OR diaries OR journal OR journals OR journaling OR writing) NEAR/7 ('intensive care unit' OR 'intensive care units' OR ICU\* OR PICU\* OR NICU\*)):ti,ab | 516 |
| 8. Combined | #6 OR #7 | 215,282 |
| 9. VA ESP and EPOC filter: | 'Randomized Controlled Trial'/exp OR 'Controlled Clinical Trial'/exp OR 'Clinical Trial'/exp OR 'Observational Study'/exp  OR 'Evaluation Study'/exp OR 'Comparative Study'/exp | 3,919,392 |
| 10. VA ESP and EPOC filter: rct or quasi keywords | randomized:ti,ab OR randomised:ti,ab OR randomization:ti,ab OR randomisation:ti,ab OR placebo:ti,ab OR randomly:ti,ab OR trial:ti,ab OR trials:ti,ab OR groups:ti,ab OR 'evaluation study':ti,ab OR 'evaluation studies':ti,ab OR 'intervention study':ti,ab OR 'intervention studies':ti,ab OR longitudinal:ti,ab OR longitudinally:ti,ab OR prospective:ti,ab OR prospectively:ti,ab OR follow-up:ti,ab OR 'follow up':ti,ab OR followup:ti,ab OR cross-sectional:ti,ab OR 'cross sectional':ti,ab OR 'comparative study':ti,ab OR 'comparative studies':ti,ab OR nonrandom:ti,ab OR non-random:ti,ab OR nonrandomized:ti,ab OR non-randomized:ti,ab OR nonrandomised:ti,ab OR non-randomised:ti,ab OR quasi-experiment\*:ti,ab OR quazi-experiment\*:ti,ab OR quasiexperiment\*:ti,ab OR quaziexperiment\*:ti,ab OR quasirandom\*:ti,ab OR quazirandom\*:ti,ab OR quasi-random\*:ti,ab OR quazi-random\*:ti,ab OR quasi-control\*:ti,ab OR quazi-control\*:ti,ab OR quasicontrol\*:ti,ab OR quazicontrol\*:ti,ab | 8,888,755 |
| 11. VA ESP and EPOC filter : controlled trial or study keywords | controlled:ti,ab AND (trial:ti,ab OR study:ti,ab) | 800,611 |
| 12. VA ESP and EPOC filter: pre-post keywords | (pre-post:ti,ab OR 'pre post':ti,ab OR posttest:ti,ab OR post-test:ti,ab OR 'post test':ti,ab OR pretest:ti,ab OR pre-test:ti,ab OR 'pre test':ti,ab OR 'repeated measure':ti,ab OR 'repeated measures':ti,ab) | 150,912 |
| 13. VA ESP and EPOC filter: before and after keywords | (before:ti,ab AND after:ti,ab) OR (before:ti,ab AND during:ti,ab) | 1,620,379 |
| 14. VA ESP and EPOC filter: interrupted time series keywords | 'time series':ti,ab AND interrupt\*:ti,ab | 7,783 |
| 15. VA ESP and EPOC filter: multiple time points keywords | 'time points':ti,ab AND (multiple:ti,ab OR one:ti,ab OR two:ti,ab OR three:ti,ab OR four:ti,ab OR five:ti,ab OR six:ti,ab OR seven:ti,ab OR eight:ti,ab OR nine:ti,ab OR ten:ti,ab OR month:ti,ab OR monthly:ti,ab OR day:ti,ab OR daily:ti,ab OR week:ti,ab OR weekly:ti,ab OR hour:ti,ab OR hourly:ti,ab) | 141,735 |
| 16. VA ESP and EPOC filter combined | #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 | 11,759,198 |
| 17. All concepts Combined | #4 AND #5 AND #8 AND #16 | 6,482 |
| 18. Remove case reports/editorials | #17 NOT ('case report'/exp OR 'a case report':ti OR ': case report':ti OR 'case study'/exp OR 'editorial'/exp OR 'letter'/exp OR 'note'/exp OR [editorial]/lim OR [letter]/lim OR [note]/lim OR [conference abstract]/lim OR 'conference abstract'/exp OR 'conference abstract'/it) | 4,373 |
| 19. Remove non- human articles | #18 NOT ([animals]/lim NOT [humans]/lim) | 4,359 |

* Imported 4359 records into EndNote

**Database:** CINAHL (EBSCOhost)

**Date:** 2/16/2024

|  |  |  |
| --- | --- | --- |
| Steps | Search String | Results |
| 1. Family | (MH "Family+") OR (MH "Nuclear Family+") OR (MH “Extended Family+”) OR (MH "Support, Social+") OR (MH "Family Relations+") OR (MH "Adult Children") OR (MH "Family Characteristics+") OR (MH "Sibling Relations") OR (MH "Spouses") OR (MH "Siblings") OR (MH "Mothers+") OR (MH "Fathers+") OR (MH "Parents+") OR (MH "Community Support") OR (MH "Family Support") OR TI(family OR families OR relative OR relatives OR spouse OR spouses OR spousal OR partner OR partners OR husband OR husbands OR wife OR wives OR "adult child" OR "adult children" OR "adult daughter" OR "adult daughters" OR "adult son" OR "adult sons" OR sibling OR siblings OR sister OR sisters OR stepsister OR stepsisters OR brother OR brothers OR stepbrother OR stepbrothers OR aunt OR aunts OR uncle OR uncles OR cousin OR cousins OR friend OR friends OR neighbor OR neighbors OR neighbour OR neighbours OR "significant other" OR "significant others" OR "next of kin" OR boyfriend OR boyfriends OR girlfriend OR girlfriends OR mother OR mothers OR father OR fathers OR parent OR parents OR ((medical OR health OR healthcare) N2 (proxy OR proxies OR surrogate OR surrogates OR surrogacy)) OR AB(family OR families OR relative OR relatives OR spouse OR spouses OR spousal OR partner OR partners OR husband OR husbands OR wife OR wives OR "adult child" OR "adult children" OR "adult daughter" OR "adult daughters" OR "adult son" OR "adult sons" OR sibling OR siblings OR sister OR sisters OR stepsister OR stepsisters OR brother OR brothers OR stepbrother OR stepbrothers OR aunt OR aunts OR uncle OR uncles OR cousin OR cousins OR friend OR friends OR neighbor OR neighbors OR neighbour OR neighbours OR "significant other" OR "significant others" OR "next of kin" OR boyfriend OR boyfriends OR girlfriend OR girlfriends OR mother OR mothers OR father OR fathers OR parent OR parents OR ((medical OR health OR healthcare) N2 (proxy OR proxies OR surrogate OR surrogates OR surrogacy)) | 931,964 |
| 2.      Informal Caregivers | (MH "Caregivers") AND (TI(informal OR informally OR nonprofessional OR non-professional OR non-clinical OR nonclinical OR unpaid) OR AB(informal OR informally OR nonprofessional OR non-professional OR non-clinical OR nonclinical OR unpaid)) | 4,422 |
| 3.       Informal Caregivers | TI((informal OR informally OR nonprofessional OR non-professional OR non-clinical OR nonclinical OR unpaid) N5 ("care giver" OR "care givers" OR caregiver OR caregivers OR caregiving OR caretaker OR caretakers OR "care taker" OR "care takers" OR carer OR carers OR careworker OR careworkers OR "care worker" OR "care workers" OR "support person" OR "support persons" OR "support people")) OR ("lay caregiver" OR "lay caregivers" OR "lay carer" OR "lay carers") OR ((patient OR patients OR hospital) N3 (visitor OR visitors OR guardian OR guardians OR companion OR companions)) OR AB((informal OR informally OR nonprofessional OR non-professional OR non-clinical OR nonclinical OR unpaid) N5 ("care giver" OR "care givers" OR caregiver OR caregivers OR caregiving OR caretaker OR caretakers OR "care taker" OR "care takers" OR carer OR carers OR careworker OR careworkers OR "care worker" OR "care workers" OR "support person" OR "support persons" OR "support people")) OR ("lay caregiver" OR "lay caregivers" OR "lay carer" OR "lay carers") OR ((patient OR patients OR hospital) N3 (visitor OR visitors OR guardian OR guardians OR companion OR companions)) | 9,338 |
| 4.      combined | S1 OR S2 OR S3 | 936,509 |
| 5.      ICU/intensive care/critical care including NICUs and PICUs | (MH "Intensive Care Units+") OR (MH "Critical Care+") OR (MH "Critical Illness") OR TI(ICU\* OR NICU\*  OR PICU\* OR "intensive care" OR "critical care" OR "seriously ill" OR "critically ill" OR "serious illness\*" OR "critical illness\*" OR "septic shock\*" OR "severe sepsis\*" OR "mechanical vent\*" OR "mechanically vent\*" OR ((pre-term OR preterm OR prematur\*) N3 (infant\* OR neonat\* OR bab\* OR newborn\*))) OR AB(ICU\* OR NICU\* OR PICU\* OR "intensive care" OR "critical care" OR "seriously ill" OR "critically ill" OR "serious illness\*" OR "critical illness\*" OR "septic shock\*" OR "severe sepsis\*" OR "mechanical vent\*" OR "mechanically vent\*" OR ((pre-term OR preterm OR prematur\*) N3 (infant\* OR neonat\* OR bab\* OR newborn\*))) | 207,654 |
| 6. General family centered support interventions (also covers Participating in direct patient care partnership in care (empowerment and involvement in care); | TI(((family-centered OR family-centred OR "family centered" OR "family centred" OR family-integrated OR "family integrated" OR family-member\* OR "family member\*" OR family-focused OR "family focused" OR family-participatory OR "family participatory") N3 (care OR caring OR intervention\* OR strateg\* OR support OR program\* OR approach\*)) OR ((Family OR families OR caregiver\* OR "care giver\*" OR carer\* OR relative\* OR parent\* OR mother\* OR father\* OR maternal OR maternally OR paternal OR paternally OR spous\* OR partner\*) N3 (intervention\* OR involv\* OR participat\* OR engag\* OR empower\* OR support\* OR visit\* OR call\* OR presence))) OR AB(((family-centered OR family-centred OR "family centered" OR "family centred" OR family-integrated OR "family integrated" OR family-member\* OR "family member\*" OR family-focused OR "family focused" OR family-participatory OR "family participatory") N3 (care OR caring OR intervention\* OR strateg\* OR support OR program\* OR approach\*)) OR ((Family OR families OR caregiver\* OR "care giver\*" OR carer\* OR relative\* OR parent\* OR mother\* OR father\* OR maternal OR maternally OR paternal OR paternally OR spous\* OR partner\*) N3 (intervention\* OR involv\* OR participat\* OR engag\* OR empower\* OR support\* OR visit\* OR call\* OR presence))) | 115,086 |
| 7. Specific family facing patient interventions: ICU diaries | TI((diary OR diaries OR journal OR journals OR journaling OR writing) N7 ("intensive care unit" OR ICU\* OR PICU\* OR NICU\*)) OR AB((diary OR diaries OR journal OR journals OR journaling OR writing) N7 ("intensive care unit" OR "intensive care units" OR ICU\* OR PICU\* OR NICU\*)) | 323 |
| 8. Combined | S6 OR S7 | 115,345 |
| 9.VA ESP and EPOC filter: Mesh terms | (MH "Randomized Controlled Trials+") OR (MH "Clinical Trials+") OR (MH "Nonexperimental Studies+") OR (MH "Evaluation Research+") OR (MH "Comparative Studies+") | 1,461,022 |
| 10. VA ESP and EPOC filter: rct or quasi keywords | TI(randomized OR randomised OR randomization OR randomisation OR placebo OR randomly OR trial OR trials OR groups  OR "evaluation study" OR "evaluation studies" OR "intervention study" OR "intervention studies" OR longitudinal OR longitudinally OR prospective OR prospectively OR follow-up OR "follow up" OR followup OR cross-sectional OR "cross sectional" OR "comparative study" OR "comparative studies" OR nonrandom OR "non-random" OR nonrandomized OR "non-randomized" OR nonrandomised OR "non-randomised" OR quasi-experiment\* OR quazi-experiment\* OR quasiexperiment\* OR quaziexperiment\* OR quasirandom\* OR quazirandom\* OR quasi-random\* OR quazi-random\* OR quasi-control\* OR quazi-control\* OR quasicontrol\* OR quazicontrol\*) OR AB(randomized OR randomised OR randomization OR randomisation OR placebo OR randomly OR trial OR trials OR groups OR "evaluation study" OR "evaluation studies" OR "intervention study" OR "intervention studies" OR longitudinal OR longitudinally OR prospective OR prospectively OR follow-up OR "follow up" OR followup OR cross-sectional OR "cross sectional" OR "comparative study" OR "comparative studies" OR nonrandom OR "non-random" OR nonrandomized OR "non-randomized" OR nonrandomised OR "non-randomised" OR quasi-experiment\* OR quazi-experiment\* OR quasiexperiment\* OR quaziexperiment\* OR quasirandom\* OR quazirandom\* OR quasi-random\* OR quazi-random\* OR quasi-control\* OR quazi-control\* OR quasicontrol\* OR quazicontrol\*) | 1,848,633 |
| 11. VA ESP and EPOC filter : controlled trial or study keywords | TI(controlled AND (trial OR study)) OR AB(controlled AND (trial OR study)) | 234,634 |
| 12. VA ESP and EPOC filter: pre-post keywords | TI("pre-post" OR "pre post" OR "posttest" OR "post-test" OR "post test" OR pretest OR "pre-test" OR "pre test" OR "repeated measure" OR "repeated measures") OR AB("pre-post" OR "pre post" OR "posttest" OR "post-test" OR "post test" OR pretest OR "pre-test" OR "pre test" OR "repeated measure" OR "repeated measures") | 52,714 |
| 13. VA ESP and EPOC filter: before and after keywords | TI((before AND after) OR (before AND during)) OR AB((before AND after) OR (before AND during)) | 216,226 |
| 14. VA ESP and EPOC filter: interrupted time series keywords | TI("time series" AND interrupt\*) OR AB("time series" AND interrupt\*) | 2,927 |
| 15. VA ESP and EPOC filter: multiple time points keywords | TI("time points" AND (multiple OR one OR two OR three OR four OR five OR six OR seven OR eight OR nine OR ten OR month OR monthly OR day OR daily OR week OR weekly OR hour OR hourly)) OR AB("time points" AND (multiple OR one OR two OR three OR four OR five OR six OR seven OR eight OR nine OR ten OR month OR monthly OR day OR daily OR week OR weekly OR hour OR hourly)) | 24,082 |
| 16. VA ESP and EPOC filter combined | S9 OR S10 OR S11 OR S12 OR S13 OR S14 OR S15 | 2,510,055 |
| 17. All concepts Combined | S4 AND S5 AND S8 AND S16 | 3,376 |
| 18. Remove case reports/editorials | S17 NOT PT (Case Study OR Commentary OR Editorial OR Letter) | 3,308 |
| 19. Remove non- human articles | S18 NOT (((MH "Animals+") OR (MH "Animal Studies") OR (TI "animal model\*")) NOT (MH "human")) | 3,308 |

* Imported 3308 records into EndNote