

B.1 Clinical search literature search strategy

Searches were constructed using a PICO framework where population (P) terms were combined with Intervention (I) and in some cases Comparison (C) terms. Outcomes (O) are rarely used in search strategies for interventions as these concepts may not be well described in title, abstract or indexes and therefore difficult to retrieve. Search filters were applied to the search where appropriate.

Table 10: Database date parameters and filters used

| Database | Dates searched | Search filter used |
|------------------------------------------|----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| Medline (OVID) | 1946 – 6 July 2020 | Exclusions Randomised controlled trials Systematic review studies Observational studies |
| Embase (OVID) | 1974 – 6 July 2020 | Exclusions Randomised controlled trials Systematic review studies Observational studies |
| The Cochrane Library (Wiley) | Cochrane Reviews to 2020 Issue 7 of 12 CENTRAL to 2020 Issue 7 of 12 | None |
| Epistemonikos (Epistemonikos Foundation) | Inception – 29 November 2018 | None |

Medline (Ovid) search terms

| | |
|-----|----------------------------------------------|
| 1. | exp Sleep Apnea Syndromes/ |
| 2. | (sleep* adj4 (apn?ea* or hypopn?ea*)).ti,ab. |
| 3. | (sleep* adj4 disorder* adj4 breath*).ti,ab. |
| 4. | (OSAHS or OSA or OSAS).ti,ab. |
| 5. | (obes* adj3 hypoventil*).ti,ab. |
| 6. | pickwick*.ti,ab. |
| 7. | or/1-6 |
| 8. | limit 7 to English language |
| 9. | letter/ |
| 10. | editorial/ |
| 11. | news/ |
| 12. | exp historical article/ |

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| | |
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| 13. | Anecdotes as Topic/ |
| 14. | comment/ |
| 15. | case report/ |
| 16. | (letter or comment*).ti. |
| 17. | or/9-16 |
| 18. | randomized controlled trial/ or random*.ti,ab. |
| 19. | 17 not 18 |
| 20. | animals/ not humans/ |
| 21. | exp Animals, Laboratory/ |
| 22. | exp Animal Experimentation/ |
| 23. | exp Models, Animal/ |
| 24. | exp Rodentia/ |
| 25. | (rat or rats or mouse or mice).ti. |
| 26. | or/19-25 |
| 27. | 8 not 26 |
| 28. | Monitoring, Physiologic/ |
| 29. | Patient Outcome Assessment/ |
| 30. | monitoring.ti,ab. |
| 31. | ((followup or follow-up or check* or evaluat* or appointment* or observation or observations) adj3 (timing* or interval* or year* or annual* or biannual* or month* or periodic* or frequen* or routine*)).ti,ab. |
| 32. | ((followup or follow-up or check* or evaluat* or appointment* or monitor*) adj3 (outpatient or out-patient or clinic or telephone or remote or virtual)).ti,ab. |
| 33. | ((monitor* or time point* or interval*) adj3 (year* or annual* or biannual* or month* or periodic* or frequen* or routine*)).ti,ab. |
| 34. | (telemonitor* or telemedicine or telehealth or tele monitor* or tele medicine or tele health or download* or smartphone* or smart phone or ipad* or iphone*).ti,ab. |
| 35. | ((manage* or monitor*) adj3 (virtual or remote or web* or cloud* or wireless or Internet or wi fi or wifi)).ti,ab. |
| 36. | (monitor* adj3 device*).ti,ab. |
| 37. | Telemedicine/ |
| 38. | or/28-37 |
| 39. | 27 and 38 |
| 40. | randomized controlled trial.pt. |
| 41. | controlled clinical trial.pt. |
| 42. | randomi#ed.ti,ab. |
| 43. | placebo.ab. |
| 44. | randomly.ti,ab. |
| 45. | Clinical Trials as topic.sh. |
| 46. | trial.ti. |
| 47. | or/40-46 |
| 48. | Meta-Analysis/ |
| 49. | exp Meta-Analysis as Topic/ |
| 50. | (meta analy* or metanaly* or metaanaly* or meta regression).ti,ab. |
| 51. | ((systematic* or evidence*) adj3 (review* or overview*)).ti,ab. |
| 52. | (reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab. |

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| 53. | (search strategy or search criteria or systematic search or study selection or data extraction).ab. |
| 54. | (search* adj4 literature).ab. |
| 55. | (medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab. |
| 56. | cochrane.jw. |
| 57. | ((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab. |
| 58. | or/48-57 |
| 59. | Epidemiologic studies/ |
| 60. | Observational study/ |
| 61. | exp Cohort studies/ |
| 62. | (cohort adj (study or studies or analys* or data)).ti,ab. |
| 63. | ((follow up or observational or uncontrolled or non randomi#ed or epidemiologic*) adj (study or studies or data)).ti,ab. |
| 64. | ((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys* or cohort* or data)).ti,ab. |
| 65. | Controlled Before-After Studies/ |
| 66. | Historically Controlled Study/ |
| 67. | Interrupted Time Series Analysis/ |
| 68. | (before adj2 after adj2 (study or studies or data)).ti,ab. |
| 69. | exp case control studies/ |
| 70. | case control*.ti,ab. |
| 71. | Cross-sectional studies/ |
| 72. | (cross sectional and (study or studies or review or analys* or cohort* or data)).ti,ab. |
| 73. | or/59-72 |
| 74. | 39 and (47 or 58 or 73) |

Embase (Ovid) search terms

| | |
|-----|------------------------------------------------|
| 1. | exp Sleep Disordered Breathing/ |
| 2. | (sleep* adj4 (apn?ea* or hypopn?ea*)).ti,ab. |
| 3. | (sleep* adj4 disorder* adj4 breath*).ti,ab. |
| 4. | (OSAHS or OSA or OSAS).ti,ab. |
| 5. | (obes* adj3 hypoventil*).ti,ab. |
| 6. | pickwick*.ti,ab. |
| 7. | or/1-6 |
| 8. | limit 7 to English language |
| 9. | letter.pt. or letter/ |
| 10. | note.pt. |
| 11. | editorial.pt. |
| 12. | case report/ or case study/ |
| 13. | (letter or comment*).ti. |
| 14. | or/9-13 |
| 15. | randomized controlled trial/ or random*.ti,ab. |
| 16. | 14 not 15 |
| 17. | animal/ not human/ |
| 18. | nonhuman/ |
| 19. | exp Animal Experiment/ |

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| 20. | exp Experimental Animal/ |
| 21. | animal model/ |
| 22. | exp Rodent/ |
| 23. | (rat or rats or mouse or mice).ti. |
| 24. | or/16-23 |
| 25. | 8 not 24 |
| 26. | physiologic monitoring/ |
| 27. | outcome assessment/ |
| 28. | monitoring.ti,ab. |
| 29. | ((followup or follow-up or check* or evaluat* or appointment* or observation or observations) adj3 (timing* or interval* or year* or annual* or biannual* or month* or periodic* or frequen* or routine*)).ti,ab. |
| 30. | ((followup or follow-up or check* or evaluat* or appointment* or monitor*) adj3 (outpatient or out-patient or clinic or telephone or remote or virtual)).ti,ab. |
| 31. | ((monitor* or time point* or interval*) adj3 (year* or annual* or biannual* or month* or periodic* or frequen* or routine*)).ti,ab. |
| 32. | (telemonitor* or telemedicine or telehealth or tele monitor* or tele medicine or tele health or download* or smartphone* or smart phone or ipad* or iphone*).ti,ab. |
| 33. | ((manage* or monitor*) adj3 (virtual or remote or web* or cloud* or wireless or Internet or wi fi or wifi)).ti,ab. |
| 34. | (monitor* adj3 device*).ti,ab. |
| 35. | exp telemedicine/ |
| 36. | or/26-35 |
| 37. | 25 and 36 |
| 38. | random*.ti,ab. |
| 39. | factorial*.ti,ab. |
| 40. | (crossover* or cross over*).ti,ab. |
| 41. | ((doubl* or singl*) adj blind*).ti,ab. |
| 42. | (assign* or allocat* or volunteer* or placebo*).ti,ab. |
| 43. | crossover procedure/ |
| 44. | single blind procedure/ |
| 45. | randomized controlled trial/ |
| 46. | double blind procedure/ |
| 47. | or/38-46 |
| 48. | systematic review/ |
| 49. | meta-analysis/ |
| 50. | (meta analy* or metanaly* or metaanaly* or meta regression).ti,ab. |
| 51. | ((systematic* or evidence*) adj3 (review* or overview*)).ti,ab. |
| 52. | (reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab. |
| 53. | (search strategy or search criteria or systematic search or study selection or data extraction).ab. |
| 54. | (search* adj4 literature).ab. |
| 55. | (medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab. |
| 56. | cochrane.jw. |
| 57. | ((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab. |
| 58. | or/48-57 |

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| 59. | Clinical study/ |
| 60. | Observational study/ |
| 61. | family study/ |
| 62. | longitudinal study/ |
| 63. | retrospective study/ |
| 64. | prospective study/ |
| 65. | cohort analysis/ |
| 66. | follow-up/ |
| 67. | cohort*.ti,ab. |
| 68. | 66 and 67 |
| 69. | (cohort adj (study or studies or analys* or data)).ti,ab. |
| 70. | ((follow up or observational or uncontrolled or non randomi#ed or epidemiologic*) adj (study or studies or data)).ti,ab. |
| 71. | ((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys* or cohort* or data)).ti,ab. |
| 72. | (before adj2 after adj2 (study or studies or data)).ti,ab. |
| 73. | or/59-65,68-72 |
| 74. | exp case control study/ |
| 75. | case control*.ti,ab. |
| 76. | cross-sectional study/ |
| 77. | (cross sectional and (study or studies or review or analys* or cohort* or data)).ti,ab. |
| 78. | or/73-77 |
| 79. | 37 and (47 or 58 or 78) |

Cochrane Library (Wiley) search terms

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|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1. | MeSH descriptor: [Sleep Apnea Syndromes] explode all trees |
| #2. | (sleep* near/4 (apnea* or apnoea* or hypopnea* or hypopnoea*)):ti,ab |
| #3. | (sleep* near/4 disorder* near/4 breath*):ti,ab |
| #4. | (OSAHs or OSA or OSAS):ti,ab |
| #5. | (obes* near/3 hypoventil*):ti,ab |
| #6. | pickwick*:ti,ab |
| #7. | (OR #1-#6) |
| #8. | MeSH descriptor: [Monitoring, Physiologic] this term only |
| #9. | MeSH descriptor: [Patient Outcome Assessment] this term only |
| #10. | monitoring:ti,ab |
| #11. | ((followup or follow-up or check* or evaluat* or appointment* or observation or observations) near/3 (timing* or interval* or year* or annual* or biannual* or month* or periodic* or frequen* or routine*)):ti,ab |
| #12. | ((followup or follow-up or check* or evaluat* or appointment* or monitor*) near/3 (outpatient or out-patient or clinic or telephone or remote or virtual)):ti,ab |
| #13. | ((monitor* or time point* or interval*) near/3 (year* or annual* or biannual* or month* or periodic* or frequen* or routine*)):ti,ab |
| #14. | (telemonitor* or telemedicine or telehealth or download* or smartphone*):ti,ab |
| #15. | ((manage* or monitor*) near/3 (virtual or remote or web* or cloud* or wireless or Internet)):ti,ab |
| #16. | (monitor* near/3 device*):ti,ab |
| #17. | MeSH descriptor: [Telemedicine] this term only |
| #18. | (or #8-#17) |

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| #19. | #7 AND #18 |
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Epistemonikos search terms

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| 1. | ((title:((sleep apnea syndromes) OR (sleep* AND (apn?ea* OR hypopn?ea*)) OR (sleep* AND (apn?ea* OR hypopn?ea*)) OR (sleep* AND (disorder* OR breath*)) OR (OSAHS OR OSA OR OSAS) OR (obes* AND hypoventil*) OR pickwick*) OR abstract:((sleep apnea syndromes) OR (sleep* AND (apn?ea* OR hypopn?ea*)) OR (sleep* AND (apn?ea* OR hypopn?ea*)) OR (sleep* AND (disorder* OR breath*)) OR (OSAHS OR OSA OR OSAS) OR (obes* AND hypoventil*) OR pickwick*))) |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|