Text summary of appendix A1: Appendix one contains the detailed search strategy for the systematic search in the three databases.

## **Appendix A1: Search strategy for PubMed**

| **No.** | **Search** |
| --- | --- |
| **Basic search cognitive Impairment** |
| 1 | Dementia [MeSH] |
| 2 | Mild Cognitive Impairment [MeSH] |
| 3 | Cognition Disorders [MeSH] |
| 4 | Demen\* [tiab] |
| 5 | Alzheimer\* [tiab] |
| 6 | Cognitive Disorder\* [tiab] |
| 7 | Cognition Disorder\* [tiab] |
| 8 | Cognitive impairment [tiab] |
| **9** | **1 OR 2 OR 3 OR 4 OR 5 OR 6 OR 7 OR 8** |
| **Basic search measurements** |
| 10 | Needs Assessment [MeSH] |
| 11 | Surveys and Questionnaires [MeSH] |
| 12 | Model\* [tiab] |
| 13 | Theory [tiab] |
| 14 | Concept [tiab] |
| 15 | Conceptualisation [tiab] |
| 16 | Conceptual framework [tiab] |
| 17 | Framework [tiab] |
| 18 | Assessment [tiab] |
| 19 | Definition [tiab] |
| 20 | Instrument [tiab] |
| 21 | Measure\* [tiab] |
| 22 | Scale\* [tiab] |
| 23 | Questionnaire [tiab] |
| 24 | Actigraphy [MeSH] |
| 25 | Polysomnography [MeSH]# |
| 26 | Actigraphy [tiab] |
| 27 | Technical device\* [tiab] |
| 28 | Polysomnography [tiab]# |
| 29 | Accelerometer [tiab] |
| 30 | In-bed system\* [tiab] |
| **31** | **10 OR 11 OR 12 OR 13 OR 14 OR 15 OR 16 OR 17 OR 18 OR 19 OR 20 OR 21 OR 22 OR 23 OR 24 OR 25 OR 26 OR 27 OR 28 OR 29 OR 30** |
| **Basic search target group** |
| **32** | Aged [tiab] |
| **33** | Aged [MeSH] |
| **34** | Elder\*[tiab] |
| **35** | **32 OR 33 OR 34** |
| **Basic search sleep** |
| 36 | Sleep [MeSH] |
| 37 | Sleep Wake Disorders [MeSH] |
| 38 | Sleep [tiab] |
| 39 | Sleep disturbance\* [tiab] |
| 40 | Sleep disorder\* [tiab] |
| **41** | **36 OR 37 OR 38 OR 39 OR 40** |
| **42** | **9 AND 31 AND 35 AND 41** |

#Polysomnography was added as a search term although this measurement is unsuitable clinical practice in nursing homes. The gold standard for diagnosing sleep disturbances in general is the use of self-measurements in combination with polysomnography. To conduct potentially backward citation tracking for psychometric studies of self-measurements this term has nevertheless been included.