**Table X - Variable definitions and sources**

| **Variable** | **Definition** | **Source** |
| --- | --- | --- |
| ***Demographics*** |  |  |
| **Age at dementia diagnosis**  **(continuous)** | Calculated on the difference between year of dementia diagnosis and year of birth | Primary care data - CPRD GOLD   * Patient file |
| **Age at dementia diagnosis**  **(categorical)** | Calculated on the difference between year of dementia diagnosis and year of birth  Categorised into 5-yearly intervals  (65-69, 70-74, 75-79, 80-84,  85-90, 90+) | Primary care data - CPRD GOLD   * Patient file |
| **Gender** | Binary variable  (Male/Female) | Primary care data - CPRD GOLD   * Patient file |
| **Ethnicity** | Categorical variable  (White, Black, Asian, Mixed, Other)  ‘Unknown’ category defined as missing data | Primary care data - CPRD GOLD   * Clinical file   Linked data   * HES APC |
| **Region** | Categorial variable  Geographical location of GP practice | Primary care data - CPRD GOLD   * Practice file |
| **GP Index of Multiple Deprivation (IMD)** | Categorical variable  Quintile IMD scores of GP practice  1 = Least deprived  5 = Most deprived  IMD based on geography from UK Census in England | Linked data  Most recent IMD score   * CPRD GOLD practice IMD file |
| **Residential care** | Binary variable  (no/yes)  Coded for living in a nursing home, residential home, old people’s home or care home | Primary care data - CPRD GOLD  Read code any time from dementia diagnosis   * Clinical file |
| ***Clinical*** |  |  |
| **Dementia diagnosis** | Whole cohort  Either dementia diagnosis or dementia drug prescription | Primary care data - CPRD GOLD  First recorded Read code in   * Clinical file   First recorded product or BNF code in   * Therapy file |
| **Dementia type** | Categorical variable  (Alzheimer’s, Vascular dementia, Dementia with Lewy Bodies, Mixed, Alcoholic, Unspecified) | Primary care data - CPRD GOLD  linked with first recorded dementia diagnosis   * Clinical file |
| **Body Mass Index (BMI)**  **(kg/m2)** | Categorical variable  Underweight (<18.5)  Healthy weight (18.5-24.9)  Overweight (25-29.9)  Obese (≥30) | Primary care data - CPRD GOLD  Most recent BMI record from   * Clinical file * Additional file (height and weight measurements) |
| **COPD** | Binary variable  (no/yes)  Ever coded for COPD | Primary care data - CPRD GOLD  At least one Read code any time from dementia diagnosis in either   * Clinical file * Referral file |
| **Coronary Heart Disease** | Binary variable  (no/yes)  Ever coded for coronary heart disease | Primary care data - CPRD GOLD  At least one Read code any time from dementia diagnosis in either   * Clinical file * Referral file |
| **Heart Failure** | Binary variable  (no/yes)  Ever coded for heart failure | Primary care data - CPRD GOLD  At least one Read code any time from dementia diagnosis in either   * Clinical file * Referral file |
| **Chronic Kidney Disease** | Binary variable  (no/yes)  Ever coded for chronic kidney disease | Primary care data - CPRD GOLD  At least one Read code any time from dementia diagnosis in either   * Clinical file * Referral file |
| **Diabetes Mellitus** | Binary variable  (no/yes)  Ever coded for diabetes (types 1 and 2 combined) | Primary care data - CPRD GOLD  At least one Read code any time from dementia diagnosis in either   * Clinical file * Referral file |
| **Cerebrovascular Disease** | Binary variable  (no/yes)  Ever coded for cerebrovascular disease (excluding stroke-related conditions) | Primary care data - CPRD GOLD  At least one Read code any time from dementia diagnosis in either   * Clinical file * Referral file |
| **History of Stroke** | Binary variable  (no/yes)  Ever coded for a history of stroke | Primary care data - CPRD GOLD  At least one Read code any time from dementia diagnosis in either   * Clinical file * Referral file |
| **Depression** | Binary variable  (no/yes)  Ever coded for depression | Primary care data - CPRD GOLD  At least one Read code any time from dementia diagnosis in either   * Clinical file * Referral file |
| **Anxiety** | Binary variable  (no/yes)  Ever coded for anxiety | Primary care data - CPRD GOLD  At least one Read code any time from dementia diagnosis in either   * Clinical file * Referral file |
| **Insomnia** | Binary variable  (no/yes)  Ever coded for insomnia | Primary care data - CPRD GOLD  At least one Read code any time from dementia diagnosis in either   * Clinical file * Referral file |
| **Long-term conditions (LTC) category** | Categorical variable  (0, 1, 2-3, 4-5, 6+ LTCs)  LTCs = COPD, coronary heart disease, COPD, heart failure, chronic kidney disease, diabetes mellitus, cerebrovascular disease, history of stroke, depression, anxiety, insomnia. | Primary care data - CPRD GOLD  At least one Read code any time from dementia diagnosis in either   * Clinical file * Referral file |
| **Polypharmacy** | Binary variable  (no/yes)  At least 5 different prescribed medications within a 90-day period, between dementia diagnosis date and index hospitalisation date | Primary care data - CPRD GOLD  At least 5 BNF codes   * Therapy file |
| **Antipsychotic medication** | Binary variable  (no/yes)  At least 2 prescriptions for antipsychotic medication within a 12-month period, between dementia diagnosis date and index hospitalisation date | Primary care data - CPRD GOLD  At least 2 product codes   * Therapy file |
| **Medication reviews** | Binary variable  (no/yes)  At least one medication review 12-months before index hospitalisation date | Primary care data - CPRD GOLD   * Clinical file |
| **Primary care appointment within 2 weeks of index discharge** | Binary variable  (no/yes)  Follow-up primary care appointment within two weeks of index hospital discharge | Primary care data - CPRD GOLD   * Consultation file |
| **Index hospital admission** | Whole cohort  Record of first hospital admission any time after dementia diagnosis | Linked data   * HES APC |
| **180-day hospital readmission** | Binary variable  (no/yes)  Record of second hospital admission that is maximum 180 days after index hospital admission | Linked data   * HES APC |
| **Follow-up (days)** | Continuous variable  Days from index hospital admission to first occurrence of 180-day readmission date, last collection date from GP, GP transfer-out date, or death date | Primary care data - CPRD GOLD   * Patient file * Practice file   Linked data   * HES APC |

CPRD GOLD = Clinical Practice Research Datalink GOLD, HES APC = Hospital Episode Statistics Admitted Patient Care, COPD = Chronic Obstructive Pulmonary Disease