**Table S2.** Selected confounders for HbA1c by domain expertise and literature (6,13). Displayed are the percentages for binary confounders or means (and standard deviation) for continuous confounders. Bed confinement was suggested as a potential confounder, but none of the patients in our cohort had this diagnosis.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Confounder category** | **Confounder name** | **SU** | **TZD** | **GLP-1** | **DPP-4** |
| **Demographics** | Gender (males) | 52% | 52% | 33% | 49% |
| Age (years) | 61.2 (12.8) | 59.6 (12.4) | 52.8 (11.8) | 58.9 (12.1) |
| Race - Caucasian | 79% | 82% | 86% | 82% |
| Race - African American | 13% | 11% | 11% | 11% |
| Race - Asian | 2% | 2% | 1% | 2% |
| Race - Native Hawaiian | 0% | 0% | 0% | 0% |
| Race - Asian/Pacific Islander | 1% | 1% | 0% | 1% |
| Race - Hispanic/Latino | 1% | 2% | 1% | 2% |
| Race - Latin American | 0% | 0% | 0% | 0% |
| Race - Multi-racial | 0% | 0% | 1% | 0% |
| Race - Other | 3% | 2% | 2% | 3% |
| Race - Refused to classify | 1% | 1% | 1% | 2% |
| Race - Unknown | 16% | 23% | 20% | 19% |
| Race - Native American or Alaskan Native | 0% | 1% | 1% | 1% |
| Insurance - Medicaid | 9% | 7% | 8% | 6% |
| Insurance - Medicare | 50% | 47% | 28% | 39% |
| Insurance - Military | 1% | 1% | 1% | 1% |
| Insurance - Private | 58% | 65% | 80% | 73% |
| Insurance - Selfpay | 5% | 5% | 5% | 4% |
| Insurance - Unknown | 16% | 18% | 11% | 10% |
| Insurance - Workerscomp | 0% | 0% | 0% | 0% |
| Insurance - Other | 1% | 1% | 2% | 1% |
| **Vitals** | BMI (kg/m2) | 33.7 (7.2) | 33.9 (7.4) | 37.8 (7.5) | 34 (7.1) |
| Diastolic blood pressure (mmHg**)** | 76.9 (9.4) | 76.9 (9.6) | 78.6 (20.4) | 77.4 (8.8) |
| Systolic blood pressure (mmHg**)** | 132.6 (39) | 130.8 (14.7) | 128 (12.8) | 129.9 (13.4) |
| **Prior conditions** | Dementia or Alzheimer’s disease (CCS category) | 1% | 0% | 0% | 0% |
| Coronary or atherosclerosis condition (CCS category) | 10% | 8% | 7% | 10% |
| Ischemic heart disease | 11% | 8% | 7% | 11% |
| Diabetes neuropathy | 3% | 2% | 4% | 3% |
| Diabetes nephropathy | 2% | 1% | 2% | 2% |
| Myocardial infarction | 2% | 1% | 1% | 2% |
| Cardiac arrest | 0% | 0% | 0% | 0% |
| Palliative care | 0% | 0% | 0% | 0% |
| History of noncompliance with medical treatment | 1% | 0% | 0% | 1% |
| Syncope | 1% | 1% | 1% | 1% |
| Dizziness | 3% | 3% | 4% | 4% |
| Osteoporosis | 2% | 2% | 2% | 2% |
| Hypertension | 57% | 55% | 59% | 64% |
| Hyperlipidemia | 56% | 60% | 63% | 68% |
| Hypoglycemia | 2% | 1% | 1% | 1% |
| Taking a beta-blocker drug | 23% | 20% | 18% | 21% |
| **Lab values** | Baseline HbA1c measurement before second line prescription (%) | 7.9 (1.8) | 7.4 (1.6) | 7.1 (1.5) | 7.7 (1.6) |
| Creatinine in blood (mg/dL) | 2.7 (12.4) | 3.4 (13.7) | 2.3 (11) | 1.8 (8.4) |
| Total cholesterol in blood (mg/dL) | 176.1 (46.8) | 175.8 (47.2) | 175.6 (38.1) | 175.9 (42) |
| HDL cholesterol in blood (mg/dL) | 42 (11.7) | 44.7 (12.5) | 44.4 (12) | 43.6 (11.8) |
| Triglycerides in blood (mg/dL) | 206.5 (214.8) | 184.1 (152.2) | 185.4 (122.1) | 193.9 (174.9) |
| Albumin in urine (g/dL) | 4.4 (27.3) | 4.3 (6.7) | 4.2 (0.4) | 4.2 (0.9) |
| Microalbumin in urine (mcg/min) | 33.6 (156.2) | 28.6 (153.9) | 13.3 (39.6) | 21.2 (139.3) |
| Protein in blood (g/dL) | 7.8 (7.8) | 7.4 (5.5) | 7.3 (3.7) | 7.2 (2.2) |
|  |  |  |  |  |
| **Time to event** | Duration of T2DM (days) | 859 (1325.3) | 774.4 (1725.3) | 815.8 (810) | 845.5 (811.9) |
| Duration of metformin use (days) | 343.3 (566.4) | 258.2 (463.7) | 423.9 (562.9) | 412.9 (570.3) |
| # of days between last HbA1c measurement and second line prescription | 51.7 (78.1) | 55.1 (80.2) | 58.6 (81.8) | 43.3 (70.6) |