**Supplement Tables**

Table 1. Categories of variables included in our study of diabetic patients.

|  |  |
| --- | --- |
| **Category** | **Variables** |
| Demographic | AgeGenderRaceEthnicityInsuranceSmoking StatusDiabetes TypeDuration of Diabetes |
| Vitals | Body Mass IndexBlood Pressure SystolicBlood Pressure DiastolicHeart Rate |
| Clinical Labs | Alanine Aminotransferase SerumAlbumin SerumAlkaline Phosphatase SerumAnion Gap SerumAspartate Aminotransferase SerumBilirubin SerumBlood GlucoseBlood HemoglobinBlood Hemoglobin A1cBlood Urea NitrogenCalcium SerumCarbon Dioxide Total SerumCholesterol SerumHigh Density Lipoprotein SerumPlatelet CountPotassium SerumProtein Total SerumSodium SerumThyroid Stimulating Hormone SerumTriglycerides SerumWhite Blood Cell Count |
| Elixhauser Comorbidity | History of AIDS/HIVHistory of Alcohol abuseHistory of Anemia deficiencyHistory of Cardiac arrhythmiasHistory of Chronic pulmonary diseaseHistory of CoagulopathyHistory of Congestive heart failureHistory of DepressionHistory of Drug abuseHistory of Fluid and electrolyte disordersHistory of HypertensionHistory of HypothyroidismHistory of Liver DiseaseHistory of LymphomaHistory of ObesityHistory of Other neurological disordersHistory of ParalysisHistory of Peripheral vascular disordersHistory of PsychosesHistory of Pulmonary circulation disordersHistory of Renal failure History of Rheumatoid arthritisHistory of Tumor or Metastatic cancerHistory of Valvular diseaseHistory of Weight loss |
| Area Deprivation Index | 1-10, ranked neighborhood score |

Table 2. ICD9/10 diagnosis codes and CPT codes for DM complications and DM related complications. Categorized into microvascular and macrovascular complications.

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| --- | --- |
| **Microvascular Complications** | **Macrovascular Complications** |
| DM-specificComplications | DM-related Complications | CPT Complications | DM-specificComplications | DM-related Complications | CPT Complications |
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| --- | --- |
| E10.2 | ICD10 |
| E10.21 | ICD10 |
| E10.22 | ICD10 |
| E10.29 | ICD10 |
| E11.2 | ICD10 |
| E11.21 | ICD10 |
| E11.22 | ICD10 |
| E11.29 | ICD10 |
| E13.2 | ICD10 |
| E13.21 | ICD10 |
| E13.22 | ICD10 |
| E13.29 | ICD10 |
| 250.4 | ICD9 |
| 250.41 | ICD9 |
| 250.42 | ICD9 |
| 250.43 | ICD9 |
| 249.4  | ICD9  |
| 249.40  | ICD9  |
| 249.41  | ICD9  |
| E08.2  | ICD10  |
| E08.21  | ICD10  |
| E08.22  | ICD10  |
| E08.29  | ICD10  |
| E10.4 | ICD10 |
| E10.40 | ICD10 |
| E10.41 | ICD10 |
| E10.42 | ICD10 |
| E10.43 | ICD10 |
| E10.44 | ICD10 |
| E10.49 | ICD10 |
| E10.61 | ICD10 |
| E10.610 | ICD10 |
| E10.618 | ICD10 |
| E10.621 | ICD10 |
| E11.4 | ICD10 |
| E11.40 | ICD10 |
| E11.41 | ICD10 |
| E11.42 | ICD10 |
| E11.43 | ICD10 |
| E11.44 | ICD10 |
| E11.49 | ICD10 |
| E11.61 | ICD10 |
| E11.610 | ICD10 |
| E11.618 | ICD10 |
| E11.621 | ICD10 |
| E13.4 | ICD10 |
| E13.40 | ICD10 |
| E13.41 | ICD10 |
| E13.42 | ICD10 |
| E13.43 | ICD10 |
| E13.44 | ICD10 |
| E13.49 | ICD10 |
| E13.61 | ICD10 |
| E13.610 | ICD10 |
| E13.618 | ICD10 |
| E13.621 | ICD10 |
| 250.6 | ICD9 |
| 250.61 | ICD9 |
| 250.62 | ICD9 |
| 250.63 | ICD9 |
| 249.6  | ICD9  |
| 249.60  | ICD9  |
| 249.61  | ICD9  |
| 357.2  | ICD9  |
| E08.4  | ICD10  |
| E08.40  | ICD10  |
| E08.41  | ICD10  |
| E08.42  | ICD10  |
| E08.43  | ICD10  |
| E08.44  | ICD10  |
| E08.49  | ICD10  |
| E08.61  | ICD10  |
| E08.610  | ICD10  |
| E08.618  | ICD10  |
| E08.621  | ICD10  |
| E10.3 | ICD10 |
| E10.31 | ICD10 |
| E10.311 | ICD10 |
| E10.319 | ICD10 |
| E10.32 | ICD10 |
| E10.321 | ICD10 |
| E10.3211 | ICD10 |
| E10.3212 | ICD10 |
| E10.3213 | ICD10 |
| E10.3219 | ICD10 |
| E10.329 | ICD10 |
| E10.3291 | ICD10 |
| E10.3292 | ICD10 |
| E10.3293 | ICD10 |
| E10.3299 | ICD10 |
| E10.33 | ICD10 |
| E10.331 | ICD10 |
| E10.3311 | ICD10 |
| E10.3312 | ICD10 |
| E10.3313 | ICD10 |
| E10.3319 | ICD10 |
| E10.339 | ICD10 |
| E10.3391 | ICD10 |
| E10.3392 | ICD10 |
| E10.3393 | ICD10 |
| E10.3399 | ICD10 |
| E10.34 | ICD10 |
| E10.341 | ICD10 |
| E10.3411 | ICD10 |
| E10.3412 | ICD10 |
| E10.3413 | ICD10 |
| E10.3419 | ICD10 |
| E10.349 | ICD10 |
| E10.3491 | ICD10 |
| E10.3492 | ICD10 |
| E10.3493 | ICD10 |
| E10.3499 | ICD10 |
| E10.35 | ICD10 |
| E10.351 | ICD10 |
| E10.3511 | ICD10 |
| E10.3512 | ICD10 |
| E10.3513 | ICD10 |
| E10.3519 | ICD10 |
| E10.352 | ICD10 |
| E10.3521 | ICD10 |
| E10.3522 | ICD10 |
| E10.3523 | ICD10 |
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| E10.353 | ICD10 |
| E10.3531 | ICD10 |
| E10.3532 | ICD10 |
| E10.3533 | ICD10 |
| E10.3539 | ICD10 |
| E10.354 | ICD10 |
| E10.3541 | ICD10 |
| E10.3542 | ICD10 |
| E10.3543 | ICD10 |
| E10.3549 | ICD10 |
| E10.355 | ICD10 |
| E10.3551 | ICD10 |
| E10.3552 | ICD10 |
| E10.3553 | ICD10 |
| E10.3559 | ICD10 |
| E10.359 | ICD10 |
| E10.3591 | ICD10 |
| E10.3592 | ICD10 |
| E10.3593 | ICD10 |
| E10.3599 | ICD10 |
| E10.37 | ICD10 |
| E10.37X1 | ICD10 |
| E10.37X2 | ICD10 |
| E10.37X3 | ICD10 |
| E10.37X9 | ICD10 |
| E10.39 | ICD10 |
| E11.3 | ICD10 |
| E11.31 | ICD10 |
| E11.311 | ICD10 |
| E11.319 | ICD10 |
| E11.32 | ICD10 |
| E11.321 | ICD10 |
| E11.3211 | ICD10 |
| E11.3212 | ICD10 |
| E11.3213 | ICD10 |
| E11.3219 | ICD10 |
| E11.329 | ICD10 |
| E11.3291 | ICD10 |
| E11.3292 | ICD10 |
| E11.3293 | ICD10 |
| E11.3299 | ICD10 |
| E11.33 | ICD10 |
| E11.331 | ICD10 |
| E11.3311 | ICD10 |
| E11.3312 | ICD10 |
| E11.3313 | ICD10 |
| E11.3319 | ICD10 |
| E11.339 | ICD10 |
| E11.3391 | ICD10 |
| E11.3392 | ICD10 |
| E11.3393 | ICD10 |
| E11.3399 | ICD10 |
| E11.34 | ICD10 |
| E11.341 | ICD10 |
| E11.3411 | ICD10 |
| E11.3412 | ICD10 |
| E11.3413 | ICD10 |
| E11.3419 | ICD10 |
| E11.349 | ICD10 |
| E11.3491 | ICD10 |
| E11.3492 | ICD10 |
| E11.3493 | ICD10 |
| E11.3499 | ICD10 |
| E11.35 | ICD10 |
| E11.351 | ICD10 |
| E11.3511 | ICD10 |
| E11.3512 | ICD10 |
| E11.3513 | ICD10 |
| E11.3519 | ICD10 |
| E11.352 | ICD10 |
| E11.3521 | ICD10 |
| E11.3522 | ICD10 |
| E11.3523 | ICD10 |
| E11.3529 | ICD10 |
| E11.353 | ICD10 |
| E11.3531 | ICD10 |
| E11.3532 | ICD10 |
| E11.3533 | ICD10 |
| E11.3539 | ICD10 |
| E11.354 | ICD10 |
| E11.3541 | ICD10 |
| E11.3542 | ICD10 |
| E11.3543 | ICD10 |
| E11.3549 | ICD10 |
| E11.355 | ICD10 |
| E11.3551 | ICD10 |
| E11.3552 | ICD10 |
| E11.3553 | ICD10 |
| E11.3559 | ICD10 |
| E11.359 | ICD10 |
| E11.3591 | ICD10 |
| E11.3592 | ICD10 |
| E11.3593 | ICD10 |
| E11.3599 | ICD10 |
| E11.37 | ICD10 |
| E11.37X1 | ICD10 |
| E11.37X2 | ICD10 |
| E11.37X3 | ICD10 |
| E11.37X9 | ICD10 |
| E11.39 | ICD10 |
| E13.3 | ICD10 |
| E13.31 | ICD10 |
| E13.311 | ICD10 |
| E13.319 | ICD10 |
| E13.32 | ICD10 |
| E13.321 | ICD10 |
| E13.3211 | ICD10 |
| E13.3212 | ICD10 |
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| E13.3292 | ICD10 |
| E13.3293 | ICD10 |
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| E13.3312 | ICD10 |
| E13.3313 | ICD10 |
| E13.3319 | ICD10 |
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| E13.3392 | ICD10 |
| E13.3393 | ICD10 |
| E13.3399 | ICD10 |
| E13.34 | ICD10 |
| E13.341 | ICD10 |
| E13.3411 | ICD10 |
| E13.3412 | ICD10 |
| E13.3413 | ICD10 |
| E13.3419 | ICD10 |
| E13.349 | ICD10 |
| E13.3491 | ICD10 |
| E13.3492 | ICD10 |
| E13.3493 | ICD10 |
| E13.3499 | ICD10 |
| E13.35 | ICD10 |
| E13.351 | ICD10 |
| E13.3511 | ICD10 |
| E13.3512 | ICD10 |
| E13.3513 | ICD10 |
| E13.3519 | ICD10 |
| E13.352 | ICD10 |
| E13.3521 | ICD10 |
| E13.3522 | ICD10 |
| E13.3523 | ICD10 |
| E13.3529 | ICD10 |
| E13.353 | ICD10 |
| E13.3531 | ICD10 |
| E13.3532 | ICD10 |
| E13.3533 | ICD10 |
| E13.3539 | ICD10 |
| E13.354 | ICD10 |
| E13.3541 | ICD10 |
| E13.3542 | ICD10 |
| E13.3543 | ICD10 |
| E13.3549 | ICD10 |
| E13.355 | ICD10 |
| E13.3551 | ICD10 |
| E13.3552 | ICD10 |
| E13.3553 | ICD10 |
| E13.3559 | ICD10 |
| E13.359 | ICD10 |
| E13.3591 | ICD10 |
| E13.3592 | ICD10 |
| E13.3593 | ICD10 |
| E13.3599 | ICD10 |
| E13.37 | ICD10 |
| E13.37X1 | ICD10 |
| E13.37X2 | ICD10 |
| E13.37X3 | ICD10 |
| E13.37X9 | ICD10 |
| E13.39 | ICD10 |
| 250.5 | ICD9 |
| 250.51 | ICD9 |
| 250.52 | ICD9 |
| 250.53 | ICD9 |
| 249.5  | ICD9  |
| 249.50  | ICD9  |
| 249.51  | ICD9  |
| 362.01  | ICD9  |
| 362.02  | ICD9  |
| 362.03  | ICD9  |
| 362.04  | ICD9  |
| 362.05  | ICD9  |
| 362.06  | ICD9  |
| E08.3  | ICD10  |
| E08.31  | ICD10  |
| E08.311  | ICD10  |
| E08.319  | ICD10  |
| E08.32  | ICD10  |
| E08.321  | ICD10  |
| E08.3211 | ICD10  |
| E08.3212 | ICD10  |
| E08.3213 | ICD10  |
| E08.3219 | ICD10  |
| E08.329  | ICD10  |
| E08.3291 | ICD10  |
| E08.3292 | ICD10  |
| E08.3293 | ICD10  |
| E08.3299 | ICD10  |
| E08.33  | ICD10  |
| E08.331  | ICD10  |
| E08.3311 | ICD10  |
| E08.3312 | ICD10  |
| E08.3313 | ICD10  |
| E08.3319 | ICD10  |
| E08.339  | ICD10  |
| E08.3391 | ICD10  |
| E08.3392 | ICD10  |
| E08.3393 | ICD10  |
| E08.3399 | ICD10  |
| E08.34  | ICD10  |
| E08.341  | ICD10  |
| E08.3411 | ICD10  |
| E08.3412 | ICD10  |
| E08.3413 | ICD10  |
| E08.3419 | ICD10  |
| E08.349  | ICD10  |
| E08.3491 | ICD10  |
| E08.3492 | ICD10  |
| E08.3493 | ICD10  |
| E08.3499 | ICD10  |
| E08.35  | ICD10  |
| E08.351  | ICD10  |
| E08.3511 | ICD10  |
| E08.3512 | ICD10  |
| E08.3513 | ICD10  |
| E08.3519 | ICD10  |
| E08.352  | ICD10  |
| E08.3521 | ICD10  |
| E08.3522 | ICD10  |
| E08.3523 | ICD10  |
| E08.3529 | ICD10  |
| E08.353  | ICD10  |
| E08.3531 | ICD10  |
| E08.3532 | ICD10  |
| E08.3533 | ICD10  |
| E08.3539 | ICD10  |
| E08.354  | ICD10  |
| E08.3541 | ICD10  |
| E08.3542 | ICD10  |
| E08.3543 | ICD10  |
| E08.3549 | ICD10  |
| E08.355  | ICD10  |
| E08.3551 | ICD10  |
| E08.3552 | ICD10  |
| E08.3553 | ICD10  |
| E08.3559 | ICD10  |
| E08.359  | ICD10  |
| E08.3591 | ICD10  |
| E08.3592 | ICD10  |
| E08.3593 | ICD10  |
| E08.3599 | ICD10  |
| E08.37  | ICD10  |
| E08.37X1 | ICD10  |
| E08.37X2 | ICD10  |
| E08.37X3 | ICD10  |
| E08.37X9 | ICD10  |
| E08.39  | ICD10  |

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| 403.00  | ICD9  |
| 403.01  | ICD9  |
| 403.10  | ICD9  |
| 403.11  | ICD9  |
| 403.90  | ICD9  |
| 403.91  | ICD9  |
| 580.8  | ICD9  |
| 580.81  | ICD9  |
| 580.89  | ICD9  |
| 580.9  | ICD9  |
| 581.0  | ICD9  |
| 581.1  | ICD9  |
| 581.3  | ICD9  |
| 581.81  | ICD9  |
| 581.9  | ICD9  |
| 582.1  | ICD9  |
| 582.8  | ICD9  |
| 582.89  | ICD9  |
| 582.9  | ICD9  |
| 583.1  | ICD9  |
| 583.2  | ICD9  |
| 583.8  | ICD9  |
| 583.81  | ICD9  |
| 583.89  | ICD9  |
| 583.9  | ICD9  |
| 584  | ICD9  |
| 584.5  | ICD9  |
| 584.8  | ICD9  |
| 584.9  | ICD9  |
| 585  | ICD9  |
| 585.1  | ICD9  |
| 585.2  | ICD9  |
| 585.3  | ICD9  |
| 585.4  | ICD9  |
| 585.5  | ICD9  |
| 585.6  | ICD9  |
| 585.9  | ICD9  |
| 586  | ICD9  |
| 587  | ICD9  |
| 588.0  | ICD9  |
| 588.8  | ICD9  |
| 588.81  | ICD9  |
| 588.89  | ICD9  |
| 588.9  | ICD9  |
| 589.1  | ICD9  |
| 589.9  | ICD9  |
| I12.0  | ICD10  |
| N00.8  | ICD10  |
| N00.9  | ICD10  |
| N02.2  | ICD10  |
| N03.2  | ICD10  |
| N03.8  | ICD10  |
| N03.9  | ICD10  |
| N04.0  | ICD10  |
| N04.8  | ICD10  |
| N04.9  | ICD10  |
| N05.2  | ICD10  |
| N05.5  | ICD10  |
| N05.8  | ICD10  |
| N05.9  | ICD10  |
| N08  | ICD10  |
| N17.0  | ICD10  |
| N17.1  | ICD10  |
| N17.2  | ICD10  |
| N17.8  | ICD10  |
| N17.9  | ICD10  |
| N18.1  | ICD10  |
| N18.2  | ICD10  |
| N18.3  | ICD10  |
| N18.4  | ICD10  |
| N18.5  | ICD10  |
| N18.6  | ICD10  |
| N18.9  | ICD10  |
| N19  | ICD10  |
| N25.0  | ICD10  |
| N25.81  | ICD10  |
| N25.89  | ICD10  |
| N25.9  | ICD10  |
| N26.9  | ICD10  |
| 707.14  | ICD9  |
| 707.15  | ICD9  |
| L97.409  | ICD10  |
| L97.509  | ICD10  |
| 361.00  | ICD9  |
| 361.05  | ICD9  |
| 361.06  | ICD9  |
| 361.8  | ICD9  |
| 361.81  | ICD9  |
| 361.89  | ICD9  |
| 361.9  | ICD9  |
| 379.23  | ICD9  |
| 379.24  | ICD9  |
| H43.13  | ICD10  |

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| 67113 |
| 67028 |
| 67036 |
| 14.31 |
| 14.34 |
| 14.35 |
| 14.49 |
| 14.54 |
| 14.74 |
| 14.75 |
| 14.79 |

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| --- | --- |
| E10.5 | ICD10 |
| E10.51 | ICD10 |
| E10.52 | ICD10 |
| E10.59 | ICD10 |
| E10.622 | ICD10 |
| E11.5 | ICD10 |
| E11.51 | ICD10 |
| E11.52 | ICD10 |
| E11.59 | ICD10 |
| E11.622 | ICD10 |
| E13.5 | ICD10 |
| E13.51 | ICD10 |
| E13.52 | ICD10 |
| E13.59 | ICD10 |
| E13.622 | ICD10 |
| 250.7 | ICD9 |
| 250.71 | ICD9 |
| 250.72 | ICD9 |
| 250.73 | ICD9 |
| 249.7  | ICD9  |
| 249.70  | ICD9  |
| 249.71  | ICD9  |
| E08.5  | ICD10  |
| E08.51  | ICD10  |
| E08.52  | ICD10  |
| E08.59  | ICD10  |
| E08.622  | ICD10  |

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| 404.00  | ICD9  |  | Vascular |
| 404.01  | ICD9  |  | Vascular |
| 404.10  | ICD9  |  | Vascular |
| 404.11  | ICD9  |  | Vascular |
| 404.13  | ICD9  |  | Vascular |
| 404.90  | ICD9  |  | Vascular |
| 404.91  | ICD9  |  | Vascular |
| 404.92  | ICD9  |  | Vascular |
| 404.93  | ICD9  |  | Vascular |
| 410  | ICD9  |  | Vascular |
| 410.00  | ICD9  |  | Vascular |
| 410.01  | ICD9  |  | Vascular |
| 410.10  | ICD9  |  | Vascular |
| 410.11  | ICD9  |  | Vascular |
| 410.12  | ICD9  |  | Vascular |
| 410.31  | ICD9  |  | Vascular |
| 410.40  | ICD9  |  | Vascular |
| 410.41  | ICD9  |  | Vascular |
| 410.42  | ICD9  |  | Vascular |
| 410.61  | ICD9  |  | Vascular |
| 410.70  | ICD9  |  | Vascular |
| 410.71  | ICD9  |  | Vascular |
| 410.72  | ICD9  |  | Vascular |
| 410.90  | ICD9  |  | Vascular |
| 410.91  | ICD9  |  | Vascular |
| 410.92  | ICD9  |  | Vascular |
| 411  | ICD9  |  | Vascular |
| 411.0  | ICD9  |  | Vascular |
| 411.1  | ICD9  |  | Vascular |
| 411.8  | ICD9  |  | Vascular |
| 411.89  | ICD9  |  | Vascular |
| 412  | ICD9  |  | Vascular |
| 413  | ICD9  |  | Vascular |
| 413.0  | ICD9  |  | Vascular |
| 413.9  | ICD9  |  | Vascular |
| 414  | ICD9  |  | Vascular |
| 414.00  | ICD9  |  | Vascular |
| 414.01  | ICD9  |  | Vascular |
| 414.02  | ICD9  |  | Vascular |
| 414.04  | ICD9  |  | Vascular |
| 414.05  | ICD9  |  | Vascular |
| 414.06  | ICD9  |  | Vascular |
| 414.07  | ICD9  |  | Vascular |
| 414.10  | ICD9  |  | Vascular |
| 414.11  | ICD9  |  | Vascular |
| 414.12  | ICD9  |  | Vascular |
| 414.2  | ICD9  |  | Vascular |
| 414.3  | ICD9  |  | Vascular |
| 414.4  | ICD9  |  | Vascular |
| 414.8  | ICD9  |  | Vascular |
| 414.9  | ICD9  |  | Vascular |
| 428  | ICD9  |  | Vascular |
| 428.0  | ICD9  |  | Vascular |
| 428.1  | ICD9  |  | Vascular |
| 428.2  | ICD9  |  | Vascular |
| 428.20  | ICD9  |  | Vascular |
| 428.21  | ICD9  |  | Vascular |
| 428.22  | ICD9  |  | Vascular |
| 428.23  | ICD9  |  | Vascular |
| 428.3  | ICD9  |  | Vascular |
| 428.30  | ICD9  |  | Vascular |
| 428.31  | ICD9  |  | Vascular |
| 428.32  | ICD9  |  | Vascular |
| 428.33  | ICD9  |  | Vascular |
| 428.40  | ICD9  |  | Vascular |
| 428.41  | ICD9  |  | Vascular |
| 428.42  | ICD9  |  | Vascular |
| 428.43  | ICD9  |  | Vascular |
| 428.9  | ICD9  |  | Vascular |
| 430  | ICD9  |  | Vascular |
| 431  | ICD9  |  | Vascular |
| 432.0  | ICD9  |  | Vascular |
| 432.1  | ICD9  |  | Vascular |
| 432.9  | ICD9  |  | Vascular |
| 433.0  | ICD9  |  | Vascular |
| 433.00  | ICD9  |  | Vascular |
| 433.01  | ICD9  |  | Vascular |
| 433.10  | ICD9  |  | Vascular |
| 433.11  | ICD9  |  | Vascular |
| 433.20  | ICD9  |  | Vascular |
| 433.21  | ICD9  |  | Vascular |
| 433.30  | ICD9  |  | Vascular |
| 433.31  | ICD9  |  | Vascular |
| 433.80  | ICD9  |  | Vascular |
| 433.9  | ICD9  |  | Vascular |
| 433.90  | ICD9  |  | Vascular |
| 434.01  | ICD9  |  | Vascular |
| 434.11  | ICD9  |  | Vascular |
| 434.90  | ICD9  |  | Vascular |
| 434.91  | ICD9  |  | Vascular |
| 435.0  | ICD9  |  | Vascular |
| 435.2  | ICD9  |  | Vascular |
| 435.3  | ICD9  |  | Vascular |
| 435.9  | ICD9  |  | Vascular |
| 436  | ICD9  |  | Vascular |
| 437.0  | ICD9  |  | Vascular |
| 437.1  | ICD9  |  | Vascular |
| 437.2  | ICD9  |  | Vascular |
| 437.3  | ICD9  |  | Vascular |
| 437.8  | ICD9  |  | Vascular |
| 437.9  | ICD9  |  | Vascular |
| 438.0  | ICD9  |  | Vascular |
| 438.10  | ICD9  |  | Vascular |
| 438.11  | ICD9  |  | Vascular |
| 438.12  | ICD9  |  | Vascular |
| 438.13  | ICD9  |  | Vascular |
| 438.19  | ICD9  |  | Vascular |
| 438.20  | ICD9  |  | Vascular |
| 438.21  | ICD9  |  | Vascular |
| 438.22  | ICD9  |  | Vascular |
| 438.30  | ICD9  |  | Vascular |
| 438.40  | ICD9  |  | Vascular |
| 438.53  | ICD9  |  | Vascular |
| 438.6  | ICD9  |  | Vascular |
| 438.7  | ICD9  |  | Vascular |
| 438.81  | ICD9  |  | Vascular |
| 438.82  | ICD9  |  | Vascular |
| 438.83  | ICD9  |  | Vascular |
| 438.84  | ICD9  |  | Vascular |
| 438.85  | ICD9  |  | Vascular |
| 438.89  | ICD9  |  | Vascular |
| 438.9  | ICD9  |  | Vascular |
| 440.0  | ICD9  |  | Vascular |
| 440.1  | ICD9  |  | Vascular |
| 440.20  | ICD9  |  | Vascular |
| 440.21  | ICD9  |  | Vascular |
| 440.22  | ICD9  |  | Vascular |
| 440.23  | ICD9  |  | Vascular |
| 440.24  | ICD9  |  | Vascular |
| 440.29  | ICD9  |  | Vascular |
| 440.30  | ICD9  |  | Vascular |
| 440.31  | ICD9  |  | Vascular |
| 440.4  | ICD9  |  | Vascular |
| 440.8  | ICD9  |  | Vascular |
| 440.9  | ICD9  |  | Vascular |
| 442.1  | ICD9  |  | Vascular |
| 443  | ICD9  |  | Vascular |
| 443.2  | ICD9  |  | Vascular |
| 443.21  | ICD9  |  | Vascular |
| 443.22  | ICD9  |  | Vascular |
| 443.24  | ICD9  |  | Vascular |
| 443.29  | ICD9  |  | Vascular |
| 443.89  | ICD9  |  | Vascular |
| 443.9  | ICD9  |  | Vascular |
| 707.10  | ICD9  |  | Vascular |
| 707.11  | ICD9  |  | Vascular |
| 707.12  | ICD9  |  | Vascular |
| 707.13  | ICD9  |  | Vascular |
| 707.19  | ICD9  |  | Vascular |
| G45.0  | ICD10  |  | Vascular |
| G45.1  | ICD10  |  | Vascular |
| G45.8  | ICD10  |  | Vascular |
| G45.9  | ICD10  |  | Vascular |
| I13.11  | ICD10  |  | Vascular |
| I13.2  | ICD10  |  | Vascular |
| I20.0  | ICD10  |  | Vascular |
| I20.1  | ICD10  |  | Vascular |
| I20.8  | ICD10  |  | Vascular |
| I20.9  | ICD10  |  | Vascular |
| I21.09  | ICD10  |  | Vascular |
| I21.11  | ICD10  |  | Vascular |
| I21.19  | ICD10  |  | Vascular |
| I21.29  | ICD10  |  | Vascular |
| I21.3  | ICD10  |  | Vascular |
| I21.4  | ICD10  |  | Vascular |
| I21.9  | ICD10  |  | Vascular |
| I21.A1  | ICD10  |  | Vascular |
| I24.0  | ICD10  |  | Vascular |
| I24.1  | ICD10  |  | Vascular |
| I24.8  | ICD10  |  | Vascular |
| I25.10  | ICD10  |  | Vascular |
| I25.2  | ICD10  |  | Vascular |
| I25.3  | ICD10  |  | Vascular |
| I25.41  | ICD10  |  | Vascular |
| I25.42  | ICD10  |  | Vascular |
| I25.5  | ICD10  |  | Vascular |
| I25.810  | ICD10  |  | Vascular |
| I25.811  | ICD10  |  | Vascular |
| I25.82  | ICD10  |  | Vascular |
| I25.83  | ICD10  |  | Vascular |
| I25.84  | ICD10  |  | Vascular |
| I25.89  | ICD10  |  | Vascular |
| I25.9  | ICD10  |  | Vascular |
| I50.1  | ICD10  |  | Vascular |
| I50.20  | ICD10  |  | Vascular |
| I50.21  | ICD10  |  | Vascular |
| I50.22  | ICD10  |  | Vascular |
| I50.23  | ICD10  |  | Vascular |
| I50.30  | ICD10  |  | Vascular |
| I50.31  | ICD10  |  | Vascular |
| I50.32  | ICD10  |  | Vascular |
| I50.33  | ICD10  |  | Vascular |
| I50.40  | ICD10  |  | Vascular |
| I50.41  | ICD10  |  | Vascular |
| I50.42  | ICD10  |  | Vascular |
| I50.43  | ICD10  |  | Vascular |
| I50.9  | ICD10  |  | Vascular |
| I60.9  | ICD10  |  | Vascular |
| I61.9  | ICD10  |  | Vascular |
| I62.00  | ICD10  |  | Vascular |
| I62.1  | ICD10  |  | Vascular |
| I62.9  | ICD10  |  | Vascular |
| I63.20  | ICD10  |  | Vascular |
| I63.219  | ICD10  |  | Vascular |
| I63.22  | ICD10  |  | Vascular |
| I63.239  | ICD10  |  | Vascular |
| I63.30  | ICD10  |  | Vascular |
| I63.40  | ICD10  |  | Vascular |
| I63.50  | ICD10  |  | Vascular |
| I63.59  | ICD10  |  | Vascular |
| I65.09  | ICD10  |  | Vascular |
| I65.1  | ICD10  |  | Vascular |
| I65.29  | ICD10  |  | Vascular |
| I65.8  | ICD10  |  | Vascular |
| I65.9  | ICD10  |  | Vascular |
| I66.09  | ICD10  |  | Vascular |
| I66.19  | ICD10  |  | Vascular |
| I66.29  | ICD10  |  | Vascular |
| I66.9  | ICD10  |  | Vascular |
| I67.1  | ICD10  |  | Vascular |
| I67.2  | ICD10  |  | Vascular |
| I67.4  | ICD10  |  | Vascular |
| I67.6  | ICD10  |  | Vascular |
| I67.81  | ICD10  |  | Vascular |
| I67.82  | ICD10  |  | Vascular |
| I67.848  | ICD10  |  | Vascular |
| I67.89  | ICD10  |  | Vascular |
| I67.9  | ICD10  |  | Vascular |
| I69.898  | ICD10  |  | Vascular |
| I69.90  | ICD10  |  | Vascular |
| I69.91  | ICD10  |  | Vascular |
| I69.910  | ICD10  |  | Vascular |
| I69.911  | ICD10  |  | Vascular |
| I69.915  | ICD10  |  | Vascular |
| I69.919  | ICD10  |  | Vascular |
| I69.920  | ICD10  |  | Vascular |
| I69.921  | ICD10  |  | Vascular |
| I69.922  | ICD10  |  | Vascular |
| I69.928  | ICD10  |  | Vascular |
| I69.931  | ICD10  |  | Vascular |
| I69.934  | ICD10  |  | Vascular |
| I69.939  | ICD10  |  | Vascular |
| I69.949  | ICD10  |  | Vascular |
| I69.951  | ICD10  |  | Vascular |
| I69.952  | ICD10  |  | Vascular |
| I69.953  | ICD10  |  | Vascular |
| I69.954  | ICD10  |  | Vascular |
| I69.959  | ICD10  |  | Vascular |
| I69.969  | ICD10  |  | Vascular |
| I69.990  | ICD10  |  | Vascular |
| I69.991  | ICD10  |  | Vascular |
| I69.992  | ICD10  |  | Vascular |
| I69.993  | ICD10  |  | Vascular |
| I69.998  | ICD10  |  | Vascular |
| I70.0  | ICD10  |  | Vascular |
| I70.1  | ICD10  |  | Vascular |
| I70.209  | ICD10  |  | Vascular |
| I70.219  | ICD10  |  | Vascular |
| I70.229  | ICD10  |  | Vascular |
| I70.25  | ICD10  |  | Vascular |
| I70.269  | ICD10  |  | Vascular |
| I70.299  | ICD10  |  | Vascular |
| I70.8  | ICD10  |  | Vascular |
| I70.90  | ICD10  |  | Vascular |
| I70.91  | ICD10  |  | Vascular |
| I70.92  | ICD10  |  | Vascular |
| I72.2  | ICD10  |  | Vascular |
| I73.9  | ICD10  |  | Vascular |
| I77.71  | ICD10  |  | Vascular |
| I77.72  | ICD10  |  | Vascular |
| I77.74  | ICD10  |  | Vascular |
| I77.79  | ICD10  |  | Vascular |
| L97.209  | ICD10  |  | Vascular |
| L97.309  | ICD10  |  | Vascular |
| L97.809  | ICD10  |  | Vascular |
| L97.909  | ICD10  |  | Vascular |

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|  |
| --- |
| 35301 |
| 37205 |
| 33533 |
| 33518 |
| 021009W |
| 02100A3 |
| 02100A9 |
| 02100AW |
| 02100Z8 |
| 02100Z9 |
| 02100ZC |
| 021109W |
| 02110Z9 |
| 021209W |
| 021309W |
| 03CH0ZZ |
| 03CJ0ZZ |
| 03CK0ZZ |
| 03CL0ZZ |
| 03CM0ZZ |
| 03CN0ZZ |
| 36.06 |
| 36.07 |
| 36.11 |
| 36.12 |
| 36.13 |
| 36.14 |
| 36.15 |
| 38.12 |

 |

Table 3. Sensitivity Analysis Results: Transition Intensity Matrix.

|  |  |  |  |
| --- | --- | --- | --- |
| **Transition** | **Original Population** | **All Micro** | **All Macro** |
| *Diabetes 🡪 Micro* | .1334 [.1284,.1386]  | .1345 [.1298,.1401]  | .1342 [.1292,.1394]  |
| *Diabetes 🡪 Macro* | .0508 [.0479,.0540] | .0511 [.0481,.0543] | .0520 [.0490,.0552] |
| *Diabetes 🡪 Death* | .0001 [.0001,.0007 | .0001 [.0000,.0006] | .0001 [.0000,.0007] |
| *Micro 🡪 Both* | .0395 [.0355,.0439] | .0415 [.0374,.0460] | .0386 [.0345,.0430] |
| *Micro 🡪 Death* | .0014 [.0001,.0036] | .0014 [.0005,.0035] | .0021 [.0012,.0038] |
| *Macro 🡪 Both* | .0784 [.0679,.0905] | .0775 [.0671,.0895] | .0835 [.0727,.0960] |
| *Macro 🡪 Death* | .0134 [.0083,.0216] | .0026 [.0009,.0076] | .0032 [.0013,.0077] |
| *Both 🡪 Death* | .0023 [.0006,.0079] | .0131 [.0082,.0211] | .0109 [.0067,.0178] |

Transition intensity [95% CI].

Table 4. Sensitivity Analysis Results: Estimated 1-Year, 3-Year , and 5-Year State-to-State Transition Probabilities Among Diabetes Patients

|  |  |
| --- | --- |
| **Year 1 and Iteration** | **Maximum Likelihood Estimate** (95% CI) |
| Diabetes | Microvascular | Macrovascular | Both | Death |
| Original |  |  |  |  |  |
| Diabetes | 0.832 (0.827,0.836) | 0.119 (0.115,0.124) | 0.044 (0.042,0.047) | 0.004 (0.003,0.005) | 0.000 (0.000,0.001) |
| Microvascular | - | 0.960 (0.955,0.964) | - | 0.038 (0.035,0.042) | 0.002 (0.001,0.004) |
| Macrovascular | - | - | 0.923 (0.910,0.933) | 0.075 (0.065,0.086) | 0.003 (0.001,0.008) |
| Both | - | - | - | 0.987 (0.978,0.992) | 0.013 (0.008,0.022) |
| Death | - | - | - | - | 1.0000 |
| All Micro |  |  |  |  |  |
| Diabetes | 0.830 (0.825,0.835) | 0.120 (0.116,0.125) | 0.0448 (0.042,0.047) | 0.004 (0.004,0.005) | 0.000 (0.000,0.001) |
| Microvascular | - |  0.958 (0.953,0.962) | - | 0.040 (0.036,0.045) | 0.002 (0.001,0.004) |
| Macrovascular | - | - | 0.923 (0.911,0.932) | 0.074 (0.064,0.086) | 0.003 (0.001,0.008) |
| Both | - | - | - | 0.987 (0.979,0.992) | 0.013 (0.008,0.022) |
| Death | - | - | - | - | 1.0000 |
| All Macro  |  |  |  |  |  |
| Diabetes | 0.830 (0.825,0.835) | 0.120 (0.116,0.124) | 0.045 (0.043,0.048) | 0.004 (0.004,0.005) | 0.000 (0.000,0.001) |
| Microvascular | - | 0.960 (0.956,0.964) | - | 0.038 (0.034,0.042) | 0.002 (0.001,0.004) |
| Macrovascular | - | - | 0.917 (0.905,0.926) | 0.079 (0.071,0.090) | 0.003 (0.002,0.008) |
| Both | - | - | - | 0.989 (0.983,0.993) | 0.011 (0.007,0.017) |
| Death | - | - | - | - | 1.0000 |
| **Year 3 and Iteration** |  |
|  |  |  |  |  |
| Original |  |  |  |  |  |
| Diabetes | 0.575 (0.565,0.585) | 0.288 (0.278,0.296) | 0.103 (0.097,0.109) | 0.032 (0.030,0.035) | 0.002 (0.001,0.003) |
| Microvascular | - | 0.885 (0.872,0.896) | - | 0.109 (0.099,0.121) | 0.006 (0.004,0.012) |
| Macrovascular | - | - | 0.785 (0.754,0.810) | 0.205 (0.179,0.233) | 0.10 (0.006,0.024) |
| Both | - | - | - | 0.961 (0.938,0.976) | 0.039 (0.024,0.062) |
| Death | - | - | - | - | 1.0000 |
| All Micro |  |  |  |  |  |
| Diabetes | 0.572 (0.561,0.582) | 0.290 (0.280,0.298) | 0.103 (0.097,0.109) | 0.033 (0.031,0.036) | 0.002 (0.001,0.003) |
| Microvascular | - | 0.879 (0.867,0.891) | - | 0.115 (0.103,0.125) | 0.006 (0.004,0.011) |
| Macrovascular | - | - | 0.786 (0.757,0.811) | 0.203 (0.179,0.230) | 0.010 (0.006,0.023) |
| Both | - | - | - | 0.961 (0.941,0.975) | 0.039 (0.025,0.059) |
| Death | - | - | - | - | 1.0000 |
| All Macro  |  |  |  |  |  |
| Diabetes | 0.572 (0.561,0.582) | 0.289 (0.279,0.298) | 0.104 (0.098,0.110) | 0.033 (0.031,0.036) | 0.002 (0.002,0.004) |
| Microvascular | - | 0.885 (0.873,0.896) | - | 0.107 (0.097,0.119) | 0.008 (0.005,0.012) |
| Macrovascular | - | - | 0.771 (0.743,0.796) | 0.217 (0.192,0.242) | 0.012 (0.007,0.024) |
| Both | - | - | - | 0.968 (0.949,0.980) | 0.032 (0.020,0.051) |
| Death | - | - | - | - | 1.0000 |
| **Year 5 and Iteration** |  |
|  |  |  |  |  |
| Original |  |  |  |  |  |
| Diabetes | 0.398 (0.387,0.410) | 0.388 (0.377,0.399) | 0.133 (0.124,0.140) | 0.077 (0.071,0.083) | 0.005 (0.004,0.008) |
| Microvascular | - | 0.815 (0.796,0.830) | - | 0.172 (0.157,0.190) | 0.012 (0.008,0.021) |
| Macrovascular | - | - | 0.668 (0.623,0.701) | 0.311 (0.277,0.348) | 0.021 (0.013,0.043) |
| Both | - | - | - | 0.935 (0.896,0.959) | 0.065 (0.041,0.104) |
| Death | - | - | - | - | 1.0000 |
| All Micro |  |  |  |  |  |
| Diabetes | 0.394 (0.383,0.406) | 0.388 (0.377,0.399) | 0.133 (0.124,0.140) | 0.079 (0.073,0.086) | 0.005 (0.004,0.008) |
| Microvascular | - | 0.807 (0.789,0.824) | - | 0.181 (0.164,0.197) | 0.012 (0.008,0.021) |
| Macrovascular | - | - | 0.670 (0.628,0.706) | 0.308 (0.272,0.347) | 0.021 (0.013,0.043) |
| Both | - | - | - | 0.936 (0.900,0.960) | 0.064 (0.039,0.100) |
| Death | - | - | - | - | 1.0000 |
| All Macro  |  |  |  |  |  |
| Diabetes | 0.394 (0.382,0.405) | 0.389 (0.377,0.401) | 0.133 (0.124,0.141) | 0.079 (0.072,0.085) | 0.006 (0.005,0.008) |
| Microvascular | - | 0.816 (0.798,0.832) | - | 0.170 (0.153,0.186) | 0.014 (0.010,0.021) |
| Macrovascular | - | - | 0.648 (0.607,0.684) | 0.329 (0.293,0.366) | 0.023 (0.014,0.040) |
| Both | - | - | - | 0.947 (0.914,0.968) | 0.053 (0.032,0.086) |
| Death | - | - | - | - | 1.0000 |