Table 1: List of features and their descriptions in the diabetes dataset.

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| --- | --- |
| **Feature Name** | **Description** |
| Encounter ID  (encounter\_id) | Unique identifier of an encounter |
| Patient number (patient\_nbr) | Unique identifier of a patient |
| Race | Values: Caucasian, Asian, African American, Hispanic, and Other |
| Gender | Values: Male, Female, and Unknown/Invalid |
| Age | Grouped in 10-year intervals: [0,10), [10,20), ..., [90,100) |
| Weight | Weight in pounds |
| Admission type  (admission\_type\_id) | Integer identifier corresponding to 9 distinct values, e.g., Emergency, Urgent, Elective, Newborn, Not Available |
| Discharge disposition  (discharge\_disposition\_id) | Integer identifier corresponding to 29 distinct values, e.g., Discharged to Home, Expired, Not Available |
| Admission source  (admission\_source\_id) | Integer identifier corresponding to 21 distinct values, e.g., Physician Referral, Emergency Room, Transfer from a Hospital |
| Time in hospital  (time\_in\_hospital) | Integer number of days between admission and discharge |
| Payer code  (payer\_code) | Integer identifier corresponding to 23 distinct values, e.g., Blue Cross/Blue Shield, Medicare, Self-pay |
| Medical specialty  (medical\_specialty) | Integer identifier of a specialty of the admitting physician (84 distinct values), e.g., Cardiology, Internal Medicine, General Practice, Surgeon |
| Number of lab procedures  (num\_lab\_procedures) | Number of lab tests performed during the encounter |
| Number of procedures  (num\_procedures) | Number of procedures (other than lab tests) performed during the encounter |
| Number of medications  (num\_medications) | Number of distinct generic names administered during the encounter |
| Number of outpatient visits  (number\_outpatient) | Number of outpatient visits of the patient in the year preceding the encounter |
| Number of emergency visits  (number\_emergency) | Number of emergency visits of the patient in the year preceding the encounter |
| Number of inpatient visits  (number\_inpatient) | Number of inpatient visits of the patient in the year preceding the encounter |
| Number of diagnoses  (number\_diagnoses) | Number of diagnoses entered into the system |
| Glucose serum test result  (max\_glu\_serum) | Indicates the range of the result or if the test was not taken. Values: ">200," ">300," "Normal," "None" |
| A1c test result  (A1Cresult) | Indicates the range of the result or if the test was not taken. Values: ">8," ">7," "Normal," "None" |
| Change of medications  (change) | Indicates if there was a change in diabetic medications (either dosage or generic name). Values: "Change" and "No Change" |
| Diabetes medications  (diabetesMed) | Indicates if any diabetic medication was prescribed. Values: "Yes" and "No" |
| 24 features for medications  (from ‘metformin’ to ‘metformin.pioglitazone’) | Indicates whether a specific drug was prescribed or if there was a dosage change (e.g., "Up," "Down," "Steady," "No") |
| Readmitted  (readmitted) | Days to inpatient readmission. Values: "<30" (readmitted in less than 30 days), ">30" (readmitted after 30 days), "No" (no record of readmission) |

Table 2: Variable Category description

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| **admission\_type\_id** | **description** | |
| 1 | Emergency | |
| 2 | Urgent | |
| 3 | Elective | |
| 4 | Newborn | |
| 5 | Not Available | |
| 6 | NULL | |
| 7 | Trauma Center | |
| 8 | Not Mapped | |
|  | | |
| **discharge\_disposition\_id** | | **description** |
| 1 | Discharged to home | |
| 2 | Discharged/transferred to another short term hospital | |
| 3 | Discharged/transferred to SNF | |
| 4 | Discharged/transferred to ICF | |
| 5 | Discharged/transferred to another type of inpatient care institution | |
| 6 | Discharged/transferred to home with home health service | |
| 7 | Left AMA | |
| 8 | Discharged/transferred to home under care of Home IV provider | |
| 9 | Admitted as an inpatient to this hospital | |
| 10 | Neonate discharged to another hospital for neonatal aftercare | |
| 11 | Expired | |
| 12 | Still patient or expected to return for outpatient services | |
| 13 | Hospice / home | |
| 14 | Hospice / medical facility | |
| 15 | Discharged/transferred within this institution to Medicare approved swing bed | |
| 16 | Discharged/transferred/referred another institution for outpatient services | |
| 17 | Discharged/transferred/referred to this institution for outpatient services | |
| 18 | NULL | |
| 19 | Expired at home. Medicaid only, hospice. | |
| 20 | Expired in a medical facility. Medicaid only, hospice. | |
| 21 | Expired, place unknown. Medicaid only, hospice. | |
| 22 | Discharged/transferred to another rehab fac including rehab units of a hospital . | |
| 23 | Discharged/transferred to a long term care hospital. | |
| 24 | Discharged/transferred to a nursing facility certified under Medicaid but not certified under Medicare. | |
| 25 | Not Mapped | |
| 26 | Unknown/Invalid | |
| 30 | Discharged/transferred to another Type of Health Care Institution not Defined Elsewhere | |
| 27 | Discharged/transferred to a federal health care facility. | |
| 28 | Discharged/transferred/referred to a psychiatric hospital of psychiatric distinct part unit of a hospital | |
| 29 | Discharged/transferred to a Critical Access Hospital (CAH). | |
|  | | |
| **admission\_source\_id** | **description** | |
| 1 | Physician Referral | |
| 2 | Clinic Referral | |
| 3 | HMO Referral | |
| 4 | Transfer from a hospital | |
| 5 | Transfer from a Skilled Nursing Facility (SNF) | |
| 6 | Transfer from another health care facility | |
| 7 | Emergency Room | |
| 8 | Court/Law Enforcement | |
| 9 | Not Available | |
| 10 | Transfer from critial access hospital | |
| 11 | Normal Delivery | |
| 12 | Premature Delivery | |
| 13 | Sick Baby | |
| 14 | Extramural Birth | |
| 15 | Not Available | |
| 17 | NULL | |
| 18 | Transfer From Another Home Health Agency | |
| 19 | Readmission to Same Home Health Agency | |
| 20 | Not Mapped | |
| 21 | Unknown/Invalid | |
| 22 | Transfer from hospital inpt/same fac reslt in a sep claim | |
| 23 | Born inside this hospital | |
| 24 | Born outside this hospital | |
| 25 | Transfer from Ambulatory Surgery Center | |
| 26 | Transfer from Hospice | |
|  |  | |
| **payer\_code** | **description** | |
| NA | Not Available / Unknown | |
| MC | Medicaid | |
| MD | Medicare | |
| HM | Health Maintenance Organization (HMO) | |
| UN | Uninsured | |
| BC | Blue Cross/Blue Shield | |
| SP | Self-Pay | |
| CP | Commercial Payer | |
| SI | State Insurance | |
| DM | Department of Defense / Military Insurance (e.g., TRICARE) | |
| CM | Charity / Community Program | |
| CH | Children's Health Insurance Program (CHIP) | |
| PO | Private Insurance - Other | |
| WC | Workers’ Compensation | |
| OT | Other | |
| OG | Other Government Programs | |
| MP | Managed Care Plan | |
| FR | Federal Program (e.g., Indian Health Service, VA Benefits) | |