



Fig S1. Trends in the penetration rate of electronically submitted health insurance claims data from medical institutions.

This figure was created by processing “Trends in the penetration rate of electronically submitted health insurance claims data from medical institutions (based on the number of receipts)” [11].

Table S1. Detailed description for the diagnosis of diabetes (translated from Japanese to English).

| Subcategories<br>(n of detail diagnosis name) | Detail name of diagnoses   | Corresponding<br>ICD-10 code |
|---|--|------------------------------|
| Type 1 diabetes mellitus (60)                 | <p>Type 1 diabetes mellitus; Type 1 diabetes mellitus with ketoacidosis, with joint complications, with ocular complications, with coma complications, with neurological complications, with kidney complications, with multiple diabetic complications, with diabetic complications with peripheral circulatory complications and without diabetic complications;</p> <p>Type 1 diabetic maculopathy, acidosis, acetonemia, ketoacidosis, ketosis, pruritus, neuropathy, gastroenteropathy, macular edema, gangrene, liver disorder, arthropathy, ocular muscle paralysis, amyotrophy, vasculopathy, hypercholesterolemia, hyperglycemia-hyperosmotic syndrome, osteopathy, diabetic coma, autonomic neuropathy, neurogenic bladder, neuralgia, glomerulosclerosis, nephropathy, nephropathy stage 1/ 2/ 3/ 3A/ 3B/ 4/ 5, renal failure, blistering, mental disorder, polyneuropathy, mononeuropathy, central retinopathy, ulcer, hypoglycemic coma, arteriosclerosis, arterial occlusive disease, iritis, cataract, skin disorder, edematous sclerosis, peripheral vasculopathy, peripheral vascular disease, peripheral neuropathy, and retinopathy</p> | E10, E100-107, E109          |
| Type 2 diabetes mellitus (61)                 | <p>Type 2 diabetes mellitus; Type 2 diabetes mellitus with ketoacidosis, with joint complications, with ocular complications, with coma complications, with neurologic complications, with renal complications, with multiple diabetic complications, with diabetic complications, with peripheral circulatory complications and without diabetic complications;</p> <p>Type 2 diabetic maculopathy, acidosis, acetonemia, ketoacidosis, ketosis, pruritus, neuropathy, myopathy, gastroenteropathy, macular edema, gangrene, liver disorder, arthropathy, ocular muscle paralysis, amyotrophy, vasculopathy, hypercholesterolemia,</p>  | E11, E110-117, E118          |

|  |   |                     |
|--|---|---------------------|
|  | hyperglycemia-hyperosmotic syndrome, osteopathy, coma, autonomic neuropathy, neurogenic bladder, neuralgia, nephrosclerosis, nephropathy, nephropathy stage 1/ 2/ 3/ 3A/ 3B/ 4/ 5, renal failure, blistering, mental disorder, polyneuropathy, mononeuropathy, central retinopathy, ulcer, hypoglycemic coma, arteriosclerosis, arterial occlusive disease, iritis, cataract, skin disorder, edematous sclerosis, peripheral vasculopathy, peripheral vascular disease, peripheral neuropathy and retinopathy |                     |
| Viral diabetes mellitus (10)                     | Viral diabetes mellitus; Viral diabetes mellitus with ketoacidosis, with ocular complications, with coma, with neurologic complications, with renal complications, with multiple diabetic complications, with diabetic complications, with peripheral circulatory complications and without diabetic complications  | E13, E130-137, E139 |
| Steroid diabetes mellitus (10)                   | Steroid diabetes mellitus; Steroid diabetes mellitus with ketoacidosis, with ocular complications, with coma, with neurologic complications, with renal complications, with multiple diabetic complications, with diabetic complications, with peripheral circulatory complications and without diabetic complications  | E13, E130-137, E139 |
| Mitochondrial diabetes mellitus (10)             | Mitochondrial diabetes mellitus; Mitochondrial diabetes mellitus with ketoacidosis complications, with ocular complications, with coma complications, with neurological complications, with renal complications, with multiple diabetic complications with diabetic complications, with peripheral circulatory complications and without diabetic complications   | E888                |
| Slowly progressive type 1 diabetes mellitus (10) | Slowly progressive type 1 diabetes mellitus; Slowly progressive type 1 diabetes mellitus with ketoacidosis, with joint complications, with ocular complications, with coma complications, with neurologic complications, with renal complications, with multiple diabetic complications, with peripheral circulatory complications and without diabetic complications   | E10, E100-107, E109 |
| Hepatic diabetes mellitus                        | Hepatic diabetes mellitus; Hepatic diabetes mellitus with ketoacidosis, with ocular   | E13, E130-          |

|  |  |                     |
|--|--|---------------------|
| (10)                                   | complications, with coma, with neurological complication, with renal complications, with multiple diabetic complications, with diabetic complications, with peripheral circulatory complications and without diabetic complications  | 137, 139            |
| Proliferative diabetic retinopathy (3) | Proliferative diabetic retinopathy; Proliferative diabetic retinopathy/ type 1 diabetes; Proliferative diabetic retinopathy/ type 2 diabetes   | E103, E113, E143    |
| Diabetes mellitus (48)                 | Diabetes mellitus; Diabetes without diabetic complications; Diabetic maculopathy, macular edema, complications, acidosis, acetonemia, ketoacidosis, ketosis, pruritus, neuropathy, gangrene, liver damage, arthropathy, ocular muscle paralysis, amyotrophy, vasculopathy, hypercholesterolemia, osteopathy, coma, autonomic neuropathy, neurogenic bladder, neuropathic pain, neuralgia, nephrosclerosis, nephropathy, kidney disease, renal failure, blistering, mental disorder, polyneuropathy, mononeuropathy, central retinopathy, ulcer, hypoglycemic coma, arteriosclerosis, arterial occlusive disease, iritis, cataract, skin disorder, edematous sclerosis, peripheral vasculopathy, peripheral vascular disease, peripheral neuropathy, foot gangrene, foot ulcer, foot lesions, retinopathy | E14, E140-147, E149 |
| Secondary diabetes mellitus (10)       | Secondary diabetes mellitus; Secondary diabetes mellitus with ketoacidosis, with ocular complications, with coma, with neurological complications, with renal complications, with multiple diabetic complications, with diabetic complications, with peripheral circulatory complications and without diabetic complications   | E13, E130-137, E139 |
| Drug-induced diabetes (10)             | Drug-induced diabetes; Drug-induced diabetes mellitus with ketoacidosis, with ocular complications, with coma, with neurological complications, with renal complications, with multiple diabetic complications, with diabetic complications, with peripheral circulatory complications and without diabetic complications  | E13, E130-137, E139 |

|                                   |  |                     |
|-----------------------------------|--|---------------------|
| Pancreatic diabetes mellitus (10) | Pancreatic diabetes mellitus; Pancreatic diabetes mellitus with ketoacidosis, with ocular complications, with coma, with neurological complications, with renal complications, with multiple diabetic complications, with diabetic complications, with peripheral circulatory complications and without diabetic complications | E13, E130-137, E139 |
| Others (7)                        | Insulin-resistant diabetes mellitus  | E11                 |
|                                   | Stable diabetes mellitus   | E11                 |
|                                   | Brittle diabetes mellitus  | E10                 |
|                                   | Malnutrition-related diabetes mellitus   | E12                 |
|                                   | Fulminant type 1 diabetes mellitus   | E101                |
|                                   | Juvenile type 2 diabetes   | E11                 |
|                                   | Bronchogenic diabetes mellitus   | E831                |

ICD-10, International Classification of Diseases, 10th revision.

Table S2. Proportion of missing data in the questions about self-reported medication

| Questionnaire of specific health checkups                    | N (% of each group)    |              |              |              |            |
|--|------------------------|--------------|--------------|--------------|------------|
|  | Age groups (years old) |              |              |              |            |
| Are you taking following medicines at present?               | All                    | 40-49        | 50-59        | 60-69        | 70-74      |
| Q1. Medications to reduce blood pressure                     | 2,634 (0.05)           | 2,414 (0.07) | 1,616 (0.05) | 859 (0.04)   | 220 (0.02) |
| Q2. Insulin injection or medications to reduce blood glucose | 2,724 (0.06)           | 2,459 (0.07) | 1,763 (0.06) | 1,025 (0.04) | 265 (0.02) |
| Q3. Medications to reduce your cholesterol level             | 2,698 (0.06)           | 2,447 (0.07) | 1,755 (0.06) | 969 (0.04)   | 251 (0.02) |

All differences in proportion of missing data in the questions between people in their 40s and the other age groups were significant ( $p < 0.007$ , according to  $\chi^2$  test with Bonferroni correction for multiple comparisons).