

SUPPLEMENTARY DATA

Supplementary Table 1. Diagnosis codes for diabetes

ICD Version	ICD Code	Description
9	250.x	Diabetes
9	357.2	POLYNEUROPATHY INDIABETES
9	362.01	BACKGROUND DIABETIC RETINOPATHY
9	362.02	PROLIFERATIVE DIABETIC RETINOPATHY
9	366.41	DIABETIC CATARACT
10	E08.00	Diabetes mellitus Due to underlying condition with hyperosmolarity without nonketotic hyperglycemic-hyperosmolar coma (NKHHC)
10	E08.01	Diabetes mellitus Due to underlying condition with hyperosmolarity with coma
10	E08.10	Diabetes mellitus Due to underlying condition with ketoacidosis without coma
10	E08.11	Diabetes mellitus Due to underlying condition with ketoacidosis with coma
10	E08.21	Diabetes mellitus Due to underlying condition with Diabetic nephropathy
10	E08.22	Diabetes mellitus Due to underlying condition with Diabetic chronic kidney Disease
10	E08.29	Diabetes mellitus Due to underlying condition with other Diabetic kidney complication
10	E08.311	Diabetes mellitus Due to underlying condition with unspecified Diabetic retinopathy with macular edema
10	E08.319	Diabetes mellitus Due to underlying condition with unspecified Diabetic retinopathy without macular edema
10	E08.321	Diabetes Mellitus Due to underlying Condition with Mild Nonproliferative Diabetic Retinopathy with Macular Edema
10	E08.3211	Diabetes mellitus Due to underlying condition with mild nonproliferative Diabetic retinopathy with macular edema, right eye
10	E08.3212	Diabetes mellitus Due to underlying condition with mild nonproliferative Diabetic retinopathy with macular edema, left eye
10	E08.3213	Diabetes mellitus Due to underlying condition with mild nonproliferative Diabetic retinopathy with macular edema, bilateral
10	E08.3219	Diabetes mellitus Due to underlying condition with mild nonproliferative Diabetic retinopathy with macular edema, unspecified eye
10	E08.329	Diabetes Mellitus Due to underlying Condition with Mild Nonproliferative Diabetic Retinopathy without Macular Edema
10	E08.3291	Diabetes mellitus Due to underlying condition with mild nonproliferative Diabetic retinopathy without macular edema, right eye
10	E08.3292	Diabetes mellitus Due to underlying condition with mild nonproliferative Diabetic retinopathy without macular edema, left eye
10	E08.3293	Diabetes mellitus Due to underlying condition with mild nonproliferative Diabetic retinopathy without macular edema, bilateral
10	E08.3299	Diabetes mellitus Due to underlying condition with mild nonproliferative Diabetic retinopathy without macular edema, unspecified eye
10	E08.331	Diabetes Mellitus Due to underlying Condition with Moderate Nonproliferative Diabetic Retinopathy with Macular Edema
10	E08.3311	Diabetes mellitus Due to underlying condition with moderate nonproliferative Diabetic retinopathy with macular edema, right eye
10	E08.3312	Diabetes mellitus Due to underlying condition with moderate nonproliferative Diabetic retinopathy with macular edema, left eye
10	E08.3313	Diabetes mellitus Due to underlying condition with moderate nonproliferative Diabetic retinopathy with macular edema, bilateral

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10	E08.3319	Diabetes mellitusDue to underlying condition with moderate nonproliferativeDiabetic retinopathy with macular edema, unspecified eye
10	E08.339	Diabetes MellitusDue to underlying Condition with Moderate NonproliferativeDiabetic Retinopathy without Macular Edema
10	E08.3391	Diabetes mellitusDue to underlying condition with moderate nonproliferativeDiabetic retinopathy without macular edema, right eye
10	E08.3392	Diabetes mellitusDue to underlying condition with moderate nonproliferativeDiabetic retinopathy without macular edema, left eye
10	E08.3393	Diabetes mellitusDue to underlying condition with moderate nonproliferativeDiabetic retinopathy without macular edema, bilateral
10	E08.3399	Diabetes mellitusDue to underlying condition with moderate nonproliferativeDiabetic retinopathy without macular edema, unspecified eye
10	E08.341	Diabetes MellitusDue to underlying Condition with Severe NonproliferativeDiabetic Retinopathy with Macular Edema
10	E08.3411	Diabetes mellitusDue to underlying condition with severe nonproliferativeDiabetic retinopathy with macular edema, right eye
10	E08.3412	Diabetes mellitusDue to underlying condition with severe nonproliferativeDiabetic retinopathy with macular edema, left eye
10	E08.3413	Diabetes mellitusDue to underlying condition with severe nonproliferativeDiabetic retinopathy with macular edema, bilateral
10	E08.3419	Diabetes mellitusDue to underlying condition with severe nonproliferativeDiabetic retinopathy with macular edema, unspecified eye
10	E08.349	Diabetes MellitusDue to underlying Condition with Severe NonproliferativeDiabetic Retinopathy without Macular Edema
10	E08.3491	Diabetes mellitusDue to underlying condition with severe nonproliferativeDiabetic retinopathy without macular edema, right eye
10	E08.3492	Diabetes mellitusDue to underlying condition with severe nonproliferativeDiabetic retinopathy without macular edema, left eye
10	E08.3493	Diabetes mellitusDue to underlying condition with severe nonproliferativeDiabetic retinopathy without macular edema, bilateral
10	E08.3499	Diabetes mellitusDue to underlying condition with severe nonproliferativeDiabetic retinopathy without macular edema, unspecified eye
10	E08.351	Diabetes MellitusDue to underlying Condition with ProliferativeDiabetic Retinopathy with Macular Edema
10	E08.3511	Diabetes mellitusDue to underlying condition with proliferativeDiabetic retinopathy with macular edema, right eye
10	E08.3512	Diabetes mellitusDue to underlying condition with proliferativeDiabetic retinopathy with macular edema, left eye
10	E08.3513	Diabetes mellitusDue to underlying condition with proliferativeDiabetic retinopathy with macular edema, bilateral
10	E08.3519	Diabetes mellitusDue to underlying condition with proliferativeDiabetic retinopathy with macular edema, unspecified eye
10	E08.3521	Diabetes mellitusDue to underlying condition with proliferativeDiabetic retinopathy with traction retinalDetachment involving the macula, right eye
10	E08.3522	Diabetes mellitusDue to underlying condition with proliferativeDiabetic retinopathy with traction retinalDetachment involving the macula, left eye
10	E08.3523	Diabetes mellitusDue to underlying condition with proliferativeDiabetic retinopathy with traction retinalDetachment involving the macula, bilateral
10	E08.3529	Diabetes mellitusDue to underlying condition with proliferativeDiabetic retinopathy with traction retinalDetachment involving the macula, unspecified eye
10	E08.3531	Diabetes mellitusDue to underlying condition with proliferativeDiabetic retinopathy with traction retinalDetachment not involving the macula, right eye

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10	E08.3532	Diabetes mellitusDue to underlying condition with proliferativeDiabetic retinopathy with traction retinalDetachment not involving the macula, left eye
10	E08.3533	Diabetes mellitusDue to underlying condition with proliferativeDiabetic retinopathy with traction retinalDetachment not involving the macula, bilateral
10	E08.3539	Diabetes mellitusDue to underlying condition with proliferativeDiabetic retinopathy with traction retinalDetachment not involving the macula, unspecified eye
10	E08.3541	Diabetes mellitusDue to underlying condition with proliferativeDiabetic retinopathy with combined traction retinalDetachment and rhegmatogenous retinalDetachment, right eye
10	E08.3542	Diabetes mellitusDue to underlying condition with proliferativeDiabetic retinopathy with combined traction retinalDetachment and rhegmatogenous retinalDetachment, left eye
10	E08.3543	Diabetes mellitusDue to underlying condition with proliferativeDiabetic retinopathy with combined traction retinalDetachment and rhegmatogenous retinalDetachment, bilateral
10	E08.3549	Diabetes mellitusDue to underlying condition with proliferativeDiabetic retinopathy with combined traction retinalDetachment and rhegmatogenous retinalDetachment, unspecified eye
10	E08.3551	Diabetes mellitusDue to underlying condition with stable proliferativeDiabetic retinopathy, right eye
10	E08.3552	Diabetes mellitusDue to underlying condition with stable proliferativeDiabetic retinopathy, left eye
10	E08.3553	Diabetes mellitusDue to underlying condition with stable proliferativeDiabetic retinopathy, bilateral
10	E08.3559	Diabetes mellitusDue to underlying condition with stable proliferativeDiabetic retinopathy, unspecified eye
10	E08.359	Diabetes MellitusDue to underlying Condition with ProliferativeDiabetic Retinopathy without Macular Edema
10	E08.3591	Diabetes mellitusDue to underlying condition with proliferativeDiabetic retinopathy without macular edema, right eye
10	E08.3592	Diabetes mellitusDue to underlying condition with proliferativeDiabetic retinopathy without macular edema, left eye
10	E08.3593	Diabetes mellitusDue to underlying condition with proliferativeDiabetic retinopathy without macular edema, bilateral
10	E08.3599	Diabetes mellitusDue to underlying condition with proliferativeDiabetic retinopathy without macular edema, unspecified eye
10	E08.36	Diabetes mellitusDue to underlying condition withDiabetic cataract
10	E08.37X1	Diabetes mellitusDue to underlying condition withDiabetic macular edema, resolved following treatment, right eye
10	E08.37X2	Diabetes mellitusDue to underlying condition withDiabetic macular edema, resolved following treatment, left eye
10	E08.37X3	Diabetes mellitusDue to underlying condition withDiabetic macular edema, resolved following treatment, bilateral
10	E08.37X9	Diabetes mellitusDue to underlying condition withDiabetic macular edema, resolved following treatment, unspecified eye
10	E08.39	Diabetes mellitusDue to underlying condition with otherDiabetic ophthalmic complication
10	E08.40	Diabetes mellitusDue to underlying condition withDiabetic neuropathy, unspecified
10	E08.41	Diabetes mellitusDue to underlying condition withDiabetic mononeuropathy
10	E08.42	Diabetes mellitusDue to underlying condition withDiabetic polyneuropathy
10	E08.43	Diabetes mellitusDue to underlying condition withDiabetic autonomic (poly)neuropathy

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10	E08.44	Diabetes mellitusDue to underlying condition withDiabetic amyotrophy
10	E08.49	Diabetes mellitusDue to underlying condition with otherDiabetic neurological complication
10	E08.51	Diabetes mellitusDue to underlying condition withDiabetic peripheral angiopathy without gangrene
10	E08.52	Diabetes mellitusDue to underlying condition withDiabetic peripheral angiopathy with gangrene
10	E08.59	Diabetes mellitusDue to underlying condition with other circulatory complications
10	E08.610	Diabetes mellitusDue to underlying condition withDiabetic neuropathic arthropathy
10	E08.618	Diabetes mellitusDue to underlying condition with otherDiabetic arthropathy
10	E08.620	Diabetes mellitusDue to underlying condition withDiabeticDermatitis
10	E08.621	Diabetes mellitusDue to underlying condition with foot ulcer
10	E08.622	Diabetes mellitusDue to underlying condition with other skin ulcer
10	E08.628	Diabetes mellitusDue to underlying condition with other skin complications
10	E08.630	Diabetes mellitusDue to underlying condition with periodontalDisease
10	E08.638	Diabetes mellitusDue to underlying condition with other oral complications
10	E08.641	Diabetes mellitusDue to underlying condition with hypoglycemia with coma
10	E08.649	Diabetes mellitusDue to underlying condition with hypoglycemia without coma
10	E08.65	Diabetes mellitusDue to underlying condition with hyperglycemia
10	E08.69	Diabetes mellitusDue to underlying condition with other specified complication
10	E08.8	Diabetes mellitusDue to underlying condition with unspecified complications
10	E08.9	Diabetes mellitusDue to underlying condition without complications
10	E10.10	Type 1Diabetes mellitus with ketoacidosis without coma
10	E10.11	Type 1Diabetes mellitus with ketoacidosis with coma
10	E10.21	Type 1Diabetes mellitus withDiabetic nephropathy
10	E10.22	Type 1Diabetes mellitus withDiabetic chronic kidneyDisease
10	E10.29	Type 1Diabetes mellitus with otherDiabetic kidney complication
10	E10.311	Type 1Diabetes mellitus with unspecifiedDiabetic retinopathy with macular edema
10	E10.319	Type 1Diabetes mellitus with unspecifiedDiabetic retinopathy without macular edema
10	E10.321	Type 1Diabetes Mellitus with Mild NonproliferativeDiabetic Retinopathy with Macular Edema
10	E10.3211	Type 1Diabetes mellitus with mild nonproliferativeDiabetic retinopathy with macular edema, right eye
10	E10.3212	Type 1Diabetes mellitus with mild nonproliferativeDiabetic retinopathy with macular edema, left eye
10	E10.3213	Type 1Diabetes mellitus with mild nonproliferativeDiabetic retinopathy with macular edema, bilateral
10	E10.3219	Type 1Diabetes mellitus with mild nonproliferativeDiabetic retinopathy with macular edema, unspecified eye
10	E10.329	Type 1Diabetes Mellitus with Mild NonproliferativeDiabetic Retinopathy without Macular Edema
10	E10.3291	Type 1Diabetes mellitus with mild nonproliferativeDiabetic retinopathy without macular edema, right eye
10	E10.3292	Type 1Diabetes mellitus with mild nonproliferativeDiabetic retinopathy without macular edema, left eye
10	E10.3293	Type 1Diabetes mellitus with mild nonproliferativeDiabetic retinopathy without macular edema, bilateral

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10	E10.3299	Type 1Diabetes mellitus with mild nonproliferativeDiabetic retinopathy without macular edema, unspecified eye
10	E10.331	Type 1Diabetes Mellitus with Moderate NonproliferativeDiabetic Retinopathy with Macular Edema
10	E10.3311	Type 1Diabetes mellitus with moderate nonproliferativeDiabetic retinopathy with macular edema, right eye
10	E10.3312	Type 1Diabetes mellitus with moderate nonproliferativeDiabetic retinopathy with macular edema, left eye
10	E10.3313	Type 1Diabetes mellitus with moderate nonproliferativeDiabetic retinopathy with macular edema, bilateral
10	E10.3319	Type 1Diabetes mellitus with moderate nonproliferativeDiabetic retinopathy with macular edema, unspecified eye
10	E10.339	Type 1Diabetes Mellitus with Moderate NonproliferativeDiabetic Retinopathy without Macular Edema
10	E10.3391	Type 1Diabetes mellitus with moderate nonproliferativeDiabetic retinopathy without macular edema, right eye
10	E10.3392	Type 1Diabetes mellitus with moderate nonproliferativeDiabetic retinopathy without macular edema, left eye
10	E10.3393	Type 1Diabetes mellitus with moderate nonproliferativeDiabetic retinopathy without macular edema, bilateral
10	E10.3399	Type 1Diabetes mellitus with moderate nonproliferativeDiabetic retinopathy without macular edema, unspecified eye
10	E10.341	Type 1Diabetes Mellitus with Severe NonproliferativeDiabetic Retinopathy with Macular Edema
10	E10.3411	Type 1Diabetes mellitus with severe nonproliferativeDiabetic retinopathy with macular edema, right eye
10	E10.3412	Type 1Diabetes mellitus with severe nonproliferativeDiabetic retinopathy with macular edema, left eye
10	E10.3413	Type 1Diabetes mellitus with severe nonproliferativeDiabetic retinopathy with macular edema, bilateral
10	E10.3419	Type 1Diabetes mellitus with severe nonproliferativeDiabetic retinopathy with macular edema, unspecified eye
10	E10.349	Type 1Diabetes Mellitus with Severe NonproliferativeDiabetic Retinopathy without Macular Edema
10	E10.3491	Type 1Diabetes mellitus with severe nonproliferativeDiabetic retinopathy without macular edema, right eye
10	E10.3492	Type 1Diabetes mellitus with severe nonproliferativeDiabetic retinopathy without macular edema, left eye
10	E10.3493	Type 1Diabetes mellitus with severe nonproliferativeDiabetic retinopathy without macular edema, bilateral
10	E10.3499	Type 1Diabetes mellitus with severe nonproliferativeDiabetic retinopathy without macular edema, unspecified eye
10	E10.351	Type 1Diabetes Mellitus with ProliferativeDiabetic Retinopathy with Macular Edema
10	E10.3511	Type 1Diabetes mellitus with proliferativeDiabetic retinopathy with macular edema, right eye
10	E10.3512	Type 1Diabetes mellitus with proliferativeDiabetic retinopathy with macular edema, left eye
10	E10.3513	Type 1Diabetes mellitus with proliferativeDiabetic retinopathy with macular edema, bilateral
10	E10.3519	Type 1Diabetes mellitus with proliferativeDiabetic retinopathy with macular edema, unspecified eye
10	E10.3521	Type 1Diabetes mellitus with proliferativeDiabetic retinopathy with traction retinalDetachment involving the macula, right eye

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10	E10.3522	Type 1Diabetes mellitus with proliferativeDiabetic retinopathy with traction retinalDetachment involving the macula, left eye
10	E10.3523	Type 1Diabetes mellitus with proliferativeDiabetic retinopathy with traction retinalDetachment involving the macula, bilateral
10	E10.3529	Type 1Diabetes mellitus with proliferativeDiabetic retinopathy with traction retinalDetachment involving the macula, unspecified eye
10	E10.3531	Type 1Diabetes mellitus with proliferativeDiabetic retinopathy with traction retinalDetachment not involving the macula, right eye
10	E10.3532	Type 1Diabetes mellitus with proliferativeDiabetic retinopathy with traction retinalDetachment not involving the macula, left eye
10	E10.3533	Type 1Diabetes mellitus with proliferativeDiabetic retinopathy with traction retinalDetachment not involving the macula, bilateral
10	E10.3539	Type 1Diabetes mellitus with proliferativeDiabetic retinopathy with traction retinalDetachment not involving the macula, unspecified eye
10	E10.3541	Type 1Diabetes mellitus with proliferativeDiabetic retinopathy with combined traction retinalDetachment and rhegmatogenous retinalDetachment, right eye
10	E10.3542	Type 1Diabetes mellitus with proliferativeDiabetic retinopathy with combined traction retinalDetachment and rhegmatogenous retinalDetachment, left eye
10	E10.3543	Type 1Diabetes mellitus with proliferativeDiabetic retinopathy with combined traction retinalDetachment and rhegmatogenous retinalDetachment, bilateral
10	E10.3549	Type 1Diabetes mellitus with proliferativeDiabetic retinopathy with combined traction retinalDetachment and rhegmatogenous retinalDetachment, unspecified eye
10	E10.3551	Type 1Diabetes mellitus with stable proliferativeDiabetic retinopathy, right eye
10	E10.3552	Type 1Diabetes mellitus with stable proliferativeDiabetic retinopathy, left eye
10	E10.3553	Type 1Diabetes mellitus with stable proliferativeDiabetic retinopathy, bilateral
10	E10.3559	Type 1Diabetes mellitus with stable proliferativeDiabetic retinopathy, unspecified eye
10	E10.359	Type 1Diabetes Mellitus with ProliferativeDiabetic Retinopathy without Macular Edema
10	E10.3591	Type 1Diabetes mellitus with proliferativeDiabetic retinopathy without macular edema, right eye
10	E10.3592	Type 1Diabetes mellitus with proliferativeDiabetic retinopathy without macular edema, left eye
10	E10.3593	Type 1Diabetes mellitus with proliferativeDiabetic retinopathy without macular edema, bilateral
10	E10.3599	Type 1Diabetes mellitus with proliferativeDiabetic retinopathy without macular edema, unspecified eye
10	E10.36	Type 1Diabetes mellitus withDiabetic cataract
10	E10.37X1	Type 1Diabetes mellitus withDiabetic macular edema, resolved following treatment, right eye
10	E10.37X2	Type 1Diabetes mellitus withDiabetic macular edema, resolved following treatment, left eye
10	E10.37X3	Type 1Diabetes mellitus withDiabetic macular edema, resolved following treatment, bilateral
10	E10.37X9	Type 1Diabetes mellitus withDiabetic macular edema, resolved following treatment, unspecified eye
10	E10.39	Type 1Diabetes mellitus with otherDiabetic ophthalmic complication
10	E10.40	Type 1Diabetes mellitus withDiabetic neuropathy, unspecified
10	E10.41	Type 1Diabetes mellitus withDiabetic mononeuropathy
10	E10.42	Type 1Diabetes mellitus withDiabetic polyneuropathy
10	E10.43	Type 1Diabetes mellitus withDiabetic autonomic (poly)neuropathy
10	E10.44	Type 1Diabetes mellitus withDiabetic amyotrophy

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10	E10.49	Type 1Diabetes mellitus with otherDiabetic neurological complication
10	E10.51	Type 1Diabetes mellitus withDiabetic peripheral angiopathy without gangrene
10	E10.52	Type 1Diabetes mellitus withDiabetic peripheral angiopathy with gangrene
10	E10.59	Type 1Diabetes mellitus with other circulatory complications
10	E10.610	Type 1Diabetes mellitus withDiabetic neuropathic arthropathy
10	E10.618	Type 1Diabetes mellitus with otherDiabetic arthropathy
10	E10.620	Type 1Diabetes mellitus withDiabeticDermatitis
10	E10.621	Type 1Diabetes mellitus with foot ulcer
10	E10.622	Type 1Diabetes mellitus with other skin ulcer
10	E10.628	Type 1Diabetes mellitus with other skin complications
10	E10.630	Type 1Diabetes mellitus with periodontalDisease
10	E10.638	Type 1Diabetes mellitus with other oral complications
10	E10.641	Type 1Diabetes mellitus with hypoglycemia with coma
10	E10.649	Type 1Diabetes mellitus with hypoglycemia without coma
10	E10.65	Type 1Diabetes mellitus with hyperglycemia
10	E10.69	Type 1Diabetes mellitus with other specified complication
10	E10.8	Type 1Diabetes mellitus with unspecified complications
10	E10.9	Type 1Diabetes mellitus without complications
10	E11.00	Type 2Diabetes mellitus with hyperosmolarity without nonketotic hyperglycemic-hyperosmolar coma (NKHHC)
10	E11.01	Type 2Diabetes mellitus with hyperosmolarity with coma
10	E11.10	Type 2Diabetes mellitus with ketoacidosis without coma
10	E11.11	Type 2Diabetes mellitus with ketoacidosis with coma
10	E11.21	Type 2Diabetes mellitus withDiabetic nephropathy
10	E11.22	Type 2Diabetes mellitus withDiabetic chronic kidneyDisease
10	E11.29	Type 2Diabetes mellitus with otherDiabetic kidney complication
10	E11.311	Type 2Diabetes mellitus with unspecifiedDiabetic retinopathy with macular edema
10	E11.319	Type 2Diabetes mellitus with unspecifiedDiabetic retinopathy without macular edema
10	E11.321	Type 2Diabetes Mellitus with Mild NonproliferativeDiabetic Retinopathy with Macular Edema
10	E11.3211	Type 2Diabetes mellitus with mild nonproliferativeDiabetic retinopathy with macular edema, right eye
10	E11.3212	Type 2Diabetes mellitus with mild nonproliferativeDiabetic retinopathy with macular edema, left eye
10	E11.3213	Type 2Diabetes mellitus with mild nonproliferativeDiabetic retinopathy with macular edema, bilateral
10	E11.3219	Type 2Diabetes mellitus with mild nonproliferativeDiabetic retinopathy with macular edema, unspecified eye
10	E11.329	Type 2Diabetes Mellitus with Mild NonproliferativeDiabetic Retinopathy without Macular Edema
10	E11.3291	Type 2Diabetes mellitus with mild nonproliferativeDiabetic retinopathy without macular edema, right eye
10	E11.3292	Type 2Diabetes mellitus with mild nonproliferativeDiabetic retinopathy without macular edema, left eye
10	E11.3293	Type 2Diabetes mellitus with mild nonproliferativeDiabetic retinopathy without macular edema, bilateral
10	E11.3299	Type 2Diabetes mellitus with mild nonproliferativeDiabetic retinopathy without macular edema, unspecified eye

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10	E11.331	Type 2Diabetes Mellitus with Moderate NonproliferativeDiabetic Retinopathy with Macular Edema
10	E11.3311	Type 2Diabetes mellitus with moderate nonproliferativeDiabetic retinopathy with macular edema, right eye
10	E11.3312	Type 2Diabetes mellitus with moderate nonproliferativeDiabetic retinopathy with macular edema, left eye
10	E11.3313	Type 2Diabetes mellitus with moderate nonproliferativeDiabetic retinopathy with macular edema, bilateral
10	E11.3319	Type 2Diabetes mellitus with moderate nonproliferativeDiabetic retinopathy with macular edema, unspecified eye
10	E11.339	Type 2Diabetes Mellitus with Moderate NonproliferativeDiabetic Retinopathy without Macular Edema
10	E11.3391	Type 2Diabetes mellitus with moderate nonproliferativeDiabetic retinopathy without macular edema, right eye
10	E11.3392	Type 2Diabetes mellitus with moderate nonproliferativeDiabetic retinopathy without macular edema, left eye
10	E11.3393	Type 2Diabetes mellitus with moderate nonproliferativeDiabetic retinopathy without macular edema, bilateral
10	E11.3399	Type 2Diabetes mellitus with moderate nonproliferativeDiabetic retinopathy without macular edema, unspecified eye
10	E11.341	Type 2Diabetes Mellitus with Severe NonproliferativeDiabetic Retinopathy with Macular Edema
10	E11.3411	Type 2Diabetes mellitus with severe nonproliferativeDiabetic retinopathy with macular edema, right eye
10	E11.3412	Type 2Diabetes mellitus with severe nonproliferativeDiabetic retinopathy with macular edema, left eye
10	E11.3413	Type 2Diabetes mellitus with severe nonproliferativeDiabetic retinopathy with macular edema, bilateral
10	E11.3419	Type 2Diabetes mellitus with severe nonproliferativeDiabetic retinopathy with macular edema, unspecified eye
10	E11.349	Type 2Diabetes Mellitus with Severe NonproliferativeDiabetic Retinopathy without Macular Edema
10	E11.3491	Type 2Diabetes mellitus with severe nonproliferativeDiabetic retinopathy without macular edema, right eye
10	E11.3492	Type 2Diabetes mellitus with severe nonproliferativeDiabetic retinopathy without macular edema, left eye
10	E11.3493	Type 2Diabetes mellitus with severe nonproliferativeDiabetic retinopathy without macular edema, bilateral
10	E11.3499	Type 2Diabetes mellitus with severe nonproliferativeDiabetic retinopathy without macular edema, unspecified eye
10	E11.351	Type 2Diabetes Mellitus with ProliferativeDiabetic Retinopathy with Macular Edema
10	E11.3511	Type 2Diabetes mellitus with proliferativeDiabetic retinopathy with macular edema, right eye
10	E11.3512	Type 2Diabetes mellitus with proliferativeDiabetic retinopathy with macular edema, left eye
10	E11.3513	Type 2Diabetes mellitus with proliferativeDiabetic retinopathy with macular edema, bilateral
10	E11.3519	Type 2Diabetes mellitus with proliferativeDiabetic retinopathy with macular edema, unspecified eye
10	E11.3521	Type 2Diabetes mellitus with proliferativeDiabetic retinopathy with traction retinalDetachment involving the macula, right eye
10	E11.3522	Type 2Diabetes mellitus with proliferativeDiabetic retinopathy with traction retinalDetachment involving the macula, left eye

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10	E11.3523	Type 2Diabetes mellitus with proliferativeDiabetic retinopathy with traction retinalDetachment involving the macula, bilateral
10	E11.3529	Type 2Diabetes mellitus with proliferativeDiabetic retinopathy with traction retinalDetachment involving the macula, unspecified eye
10	E11.3531	Type 2Diabetes mellitus with proliferativeDiabetic retinopathy with traction retinalDetachment not involving the macula, right eye
10	E11.3532	Type 2Diabetes mellitus with proliferativeDiabetic retinopathy with traction retinalDetachment not involving the macula, left eye
10	E11.3533	Type 2Diabetes mellitus with proliferativeDiabetic retinopathy with traction retinalDetachment not involving the macula, bilateral
10	E11.3539	Type 2Diabetes mellitus with proliferativeDiabetic retinopathy with traction retinalDetachment not involving the macula, unspecified eye
10	E11.3541	Type 2Diabetes mellitus with proliferativeDiabetic retinopathy with combined traction retinalDetachment and rhegmatogenous retinalDetachment, right eye
10	E11.3542	Type 2Diabetes mellitus with proliferativeDiabetic retinopathy with combined traction retinalDetachment and rhegmatogenous retinalDetachment, left eye
10	E11.3543	Type 2Diabetes mellitus with proliferativeDiabetic retinopathy with combined traction retinalDetachment and rhegmatogenous retinalDetachment, bilateral
10	E11.3549	Type 2Diabetes mellitus with proliferativeDiabetic retinopathy with combined traction retinalDetachment and rhegmatogenous retinalDetachment, unspecified eye
10	E11.3551	Type 2Diabetes mellitus with stable proliferativeDiabetic retinopathy, right eye
10	E11.3552	Type 2Diabetes mellitus with stable proliferativeDiabetic retinopathy, left eye
10	E11.3553	Type 2Diabetes mellitus with stable proliferativeDiabetic retinopathy, bilateral
10	E11.3559	Type 2Diabetes mellitus with stable proliferativeDiabetic retinopathy, unspecified eye
10	E11.359	Type 2Diabetes Mellitus with ProliferativeDiabetic Retinopathy without Macular Edema
10	E11.3591	Type 2Diabetes mellitus with proliferativeDiabetic retinopathy without macular edema, right eye
10	E11.3592	Type 2Diabetes mellitus with proliferativeDiabetic retinopathy without macular edema, left eye
10	E11.3593	Type 2Diabetes mellitus with proliferativeDiabetic retinopathy without macular edema, bilateral
10	E11.3599	Type 2Diabetes mellitus with proliferativeDiabetic retinopathy without macular edema, unspecified eye
10	E11.36	Type 2Diabetes mellitus withDiabetic cataract
10	E11.37X1	Type 2Diabetes mellitus withDiabetic macular edema, resolved following treatment, right eye
10	E11.37X2	Type 2Diabetes mellitus withDiabetic macular edema, resolved following treatment, left eye
10	E11.37X3	Type 2Diabetes mellitus withDiabetic macular edema, resolved following treatment, bilateral
10	E11.37X9	Type 2Diabetes mellitus withDiabetic macular edema, resolved following treatment, unspecified eye
10	E11.39	Type 2Diabetes mellitus with otherDiabetic ophthalmic complication
10	E11.40	Type 2Diabetes mellitus withDiabetic neuropathy, unspecified
10	E11.41	Type 2Diabetes mellitus withDiabetic mononeuropathy
10	E11.42	Type 2Diabetes mellitus withDiabetic polyneuropathy
10	E11.43	Type 2Diabetes mellitus withDiabetic autonomic (poly)neuropathy
10	E11.44	Type 2Diabetes mellitus withDiabetic amyotrophy
10	E11.49	Type 2Diabetes mellitus with otherDiabetic neurological complication

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10	E11.51	Type 2Diabetes mellitus withDiabetic peripheral angiopathy without gangrene
10	E11.52	Type 2Diabetes mellitus withDiabetic peripheral angiopathy with gangrene
10	E11.59	Type 2Diabetes mellitus with other circulatory complications
10	E11.610	Type 2Diabetes mellitus withDiabetic neuropathic arthropathy
10	E11.618	Type 2Diabetes mellitus with otherDiabetic arthropathy
10	E11.620	Type 2Diabetes mellitus withDiabeticDermatitis
10	E11.621	Type 2Diabetes mellitus with foot ulcer
10	E11.622	Type 2Diabetes mellitus with other skin ulcer
10	E11.628	Type 2Diabetes mellitus with other skin complications
10	E11.630	Type 2Diabetes mellitus with periodontalDisease
10	E11.638	Type 2Diabetes mellitus with other oral complications
10	E11.641	Type 2Diabetes mellitus with hypoglycemia with coma
10	E11.649	Type 2Diabetes mellitus with hypoglycemia without coma
10	E11.65	Type 2Diabetes mellitus with hyperglycemia
10	E11.69	Type 2Diabetes mellitus with other specified complication
10	E11.8	Type 2Diabetes mellitus with unspecified complications
10	E11.9	Type 2Diabetes mellitus without complications
10	E13.00	Other specifiedDiabetes mellitus with hyperosmolarity without nonketotic hyperglycemic-hyperosmolar coma (NKHHC)
10	E13.01	Other specifiedDiabetes mellitus with hyperosmolarity with coma
10	E13.10	Other specifiedDiabetes mellitus with ketoacidosis without coma
10	E13.11	Other specifiedDiabetes mellitus with ketoacidosis with coma
10	E13.21	Other specifiedDiabetes mellitus withDiabetic nephropathy
10	E13.22	Other specifiedDiabetes mellitus withDiabetic chronic kidneyDisease
10	E13.29	Other specifiedDiabetes mellitus with otherDiabetic kidney complication
10	E13.311	Other specifiedDiabetes mellitus with unspecifiedDiabetic retinopathy with macular edema
10	E13.319	Other specifiedDiabetes mellitus with unspecifiedDiabetic retinopathy without macular edema
10	E13.321	Other specifiedDiabetes Mellitus with Mild NonproliferativeDiabetic Retinopathy with Macular Edema
10	E13.3211	Other specifiedDiabetes mellitus with mild nonproliferativeDiabetic retinopathy with macular edema, right eye
10	E13.3212	Other specifiedDiabetes mellitus with mild nonproliferativeDiabetic retinopathy with macular edema, left eye
10	E13.3213	Other specifiedDiabetes mellitus with mild nonproliferativeDiabetic retinopathy with macular edema, bilateral
10	E13.3219	Other specifiedDiabetes mellitus with mild nonproliferativeDiabetic retinopathy with macular edema, unspecified eye
10	E13.329	Other specifiedDiabetes Mellitus with Mild NonproliferativeDiabetic Retinopathy without Macular Edema
10	E13.3291	Other specifiedDiabetes mellitus with mild nonproliferativeDiabetic retinopathy without macular edema, right eye
10	E13.3292	Other specifiedDiabetes mellitus with mild nonproliferativeDiabetic retinopathy without macular edema, left eye
10	E13.3293	Other specifiedDiabetes mellitus with mild nonproliferativeDiabetic retinopathy without macular edema, bilateral
10	E13.3299	Other specifiedDiabetes mellitus with mild nonproliferativeDiabetic retinopathy without macular edema, unspecified eye

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10	E13.331	Other specifiedDiabetes Mellitus with Moderate NonproliferativeDiabetic Retinopathy with Macular Edema
10	E13.3311	Other specifiedDiabetes mellitus with moderate nonproliferativeDiabetic retinopathy with macular edema, right eye
10	E13.3312	Other specifiedDiabetes mellitus with moderate nonproliferativeDiabetic retinopathy with macular edema, left eye
10	E13.3313	Other specifiedDiabetes mellitus with moderate nonproliferativeDiabetic retinopathy with macular edema, bilateral
10	E13.3319	Other specifiedDiabetes mellitus with moderate nonproliferativeDiabetic retinopathy with macular edema, unspecified eye
10	E13.339	Other specifiedDiabetes Mellitus with Moderate NonproliferativeDiabetic Retinopathy without Macular Edema
10	E13.3391	Other specifiedDiabetes mellitus with moderate nonproliferativeDiabetic retinopathy without macular edema, right eye
10	E13.3392	Other specifiedDiabetes mellitus with moderate nonproliferativeDiabetic retinopathy without macular edema, left eye
10	E13.3393	Other specifiedDiabetes mellitus with moderate nonproliferativeDiabetic retinopathy without macular edema, bilateral
10	E13.3399	Other specifiedDiabetes mellitus with moderate nonproliferativeDiabetic retinopathy without macular edema, unspecified eye
10	E13.341	Other specifiedDiabetes Mellitus with Severe NonproliferativeDiabetic Retinopathy with Macular Edema
10	E13.3411	Other specifiedDiabetes mellitus with severe nonproliferativeDiabetic retinopathy with macular edema, right eye
10	E13.3412	Other specifiedDiabetes mellitus with severe nonproliferativeDiabetic retinopathy with macular edema, left eye
10	E13.3413	Other specifiedDiabetes mellitus with severe nonproliferativeDiabetic retinopathy with macular edema, bilateral
10	E13.3419	Other specifiedDiabetes mellitus with severe nonproliferativeDiabetic retinopathy with macular edema, unspecified eye
10	E13.349	Other specifiedDiabetes Mellitus with Severe NonproliferativeDiabetic Retinopathy without Macular Edema
10	E13.3491	Other specifiedDiabetes mellitus with severe nonproliferativeDiabetic retinopathy without macular edema, right eye
10	E13.3492	Other specifiedDiabetes mellitus with severe nonproliferativeDiabetic retinopathy without macular edema, left eye
10	E13.3493	Other specifiedDiabetes mellitus with severe nonproliferativeDiabetic retinopathy without macular edema, bilateral
10	E13.3499	Other specifiedDiabetes mellitus with severe nonproliferativeDiabetic retinopathy without macular edema, unspecified eye
10	E13.351	Other specifiedDiabetes Mellitus with ProliferativeDiabetic Retinopathy with Macular Edema
10	E13.3511	Other specifiedDiabetes mellitus with proliferativeDiabetic retinopathy with macular edema, right eye
10	E13.3512	Other specifiedDiabetes mellitus with proliferativeDiabetic retinopathy with macular edema, left eye
10	E13.3513	Other specifiedDiabetes mellitus with proliferativeDiabetic retinopathy with macular edema, bilateral
10	E13.3519	Other specifiedDiabetes mellitus with proliferativeDiabetic retinopathy with macular edema, unspecified eye
10	E13.3521	Other specifiedDiabetes mellitus with proliferativeDiabetic retinopathy with traction retinalDetachment involving the macula, right eye

SUPPLEMENTARY DATA

10	E13.3522	Other specifiedDiabetes mellitus with proliferativeDiabetic retinopathy with traction retinalDetachment involving the macula, left eye
10	E13.3523	Other specifiedDiabetes mellitus with proliferativeDiabetic retinopathy with traction retinalDetachment involving the macula, bilateral
10	E13.3529	Other specifiedDiabetes mellitus with proliferativeDiabetic retinopathy with traction retinalDetachment involving the macula, unspecified eye
10	E13.3531	Other specifiedDiabetes mellitus with proliferativeDiabetic retinopathy with traction retinalDetachment not involving the macula, right eye
10	E13.3532	Other specifiedDiabetes mellitus with proliferativeDiabetic retinopathy with traction retinalDetachment not involving the macula, left eye
10	E13.3533	Other specifiedDiabetes mellitus with proliferativeDiabetic retinopathy with traction retinalDetachment not involving the macula, bilateral
10	E13.3539	Other specifiedDiabetes mellitus with proliferativeDiabetic retinopathy with traction retinalDetachment not involving the macula, unspecified eye
10	E13.3541	Other specifiedDiabetes mellitus with proliferativeDiabetic retinopathy with combined traction retinalDetachment and rhegmatogenous retinalDetachment, right eye
10	E13.3542	Other specifiedDiabetes mellitus with proliferativeDiabetic retinopathy with combined traction retinalDetachment and rhegmatogenous retinalDetachment, left eye
10	E13.3543	Other specifiedDiabetes mellitus with proliferativeDiabetic retinopathy with combined traction retinalDetachment and rhegmatogenous retinalDetachment, bilateral
10	E13.3549	Other specifiedDiabetes mellitus with proliferativeDiabetic retinopathy with combined traction retinalDetachment and rhegmatogenous retinalDetachment, unspecified eye
10	E13.3551	Other specifiedDiabetes mellitus with stable proliferativeDiabetic retinopathy, right eye
10	E13.3552	Other specifiedDiabetes mellitus with stable proliferativeDiabetic retinopathy, left eye
10	E13.3553	Other specifiedDiabetes mellitus with stable proliferativeDiabetic retinopathy, bilateral
10	E13.3559	Other specifiedDiabetes mellitus with stable proliferativeDiabetic retinopathy, unspecified eye
10	E13.359	Other specifiedDiabetes Mellitus with ProliferativeDiabetic Retinopathy without Macular Edema
10	E13.3591	Other specifiedDiabetes mellitus with proliferativeDiabetic retinopathy without macular edema, right eye
10	E13.3592	Other specifiedDiabetes mellitus with proliferativeDiabetic retinopathy without macular edema, left eye
10	E13.3593	Other specifiedDiabetes mellitus with proliferativeDiabetic retinopathy without macular edema, bilateral
10	E13.3599	Other specifiedDiabetes mellitus with proliferativeDiabetic retinopathy without macular edema, unspecified eye
10	E13.36	Other specifiedDiabetes mellitus withDiabetic cataract
10	E13.37X1	Other specifiedDiabetes mellitus withDiabetic macular edema, resolved following treatment, right eye
10	E13.37X2	Other specifiedDiabetes mellitus withDiabetic macular edema, resolved following treatment, left eye
10	E13.37X3	Other specifiedDiabetes mellitus withDiabetic macular edema, resolved following treatment, bilateral
10	E13.37X9	Other specifiedDiabetes mellitus withDiabetic macular edema, resolved following treatment, unspecified eye

SUPPLEMENTARY DATA

10	E13.39	Other specifiedDiabetes mellitus with otherDiabetic ophthalmic complication
10	E13.40	Other specifiedDiabetes mellitus withDiabetic neuropathy, unspecified
10	E13.41	Other specifiedDiabetes mellitus withDiabetic mononeuropathy
10	E13.42	Other specifiedDiabetes mellitus withDiabetic polyneuropathy
10	E13.43	Other specifiedDiabetes mellitus withDiabetic autonomic (poly)neuropathy
10	E13.44	Other specifiedDiabetes mellitus withDiabetic amyotrophy
10	E13.49	Other specifiedDiabetes mellitus with otherDiabetic neurological complication
10	E13.51	Other specifiedDiabetes mellitus withDiabetic peripheral angiopathy without gangrene
10	E13.52	Other specifiedDiabetes mellitus withDiabetic peripheral angiopathy with gangrene
10	E13.59	Other specifiedDiabetes mellitus with other circulatory complications
10	E13.610	Other specifiedDiabetes mellitus withDiabetic neuropathic arthropathy
10	E13.618	Other specifiedDiabetes mellitus with otherDiabetic arthropathy
10	E13.620	Other specifiedDiabetes mellitus withDiabeticDermatitis
10	E13.621	Other specifiedDiabetes mellitus with foot ulcer
10	E13.622	Other specifiedDiabetes mellitus with other skin ulcer
10	E13.628	Other specifiedDiabetes mellitus with other skin complications
10	E13.630	Other specifiedDiabetes mellitus with periodontalDisease
10	E13.638	Other specifiedDiabetes mellitus with other oral complications
10	E13.641	Other specifiedDiabetes mellitus with hypoglycemia with coma
10	E13.649	Other specifiedDiabetes mellitus with hypoglycemia without coma
10	E13.65	Other specifiedDiabetes mellitus with hyperglycemia
10	E13.69	Other specifiedDiabetes mellitus with other specified complication
10	E13.8	Other specifiedDiabetes mellitus with unspecified complications
10	E13.9	Other specifiedDiabetes mellitus without complications

SUPPLEMENTARY DATA

Supplementary Table 2. ICD-10 Procedure codes for toe and ray amputations

0Y6P0Z0	Detachment at Right 1st Toe, Complete, Open Approach
0Y6P0Z1	Detachment at Right 1st Toe, High, Open Approach
0Y6P0Z2	Detachment at Right 1st Toe, Mid, Open Approach
0Y6P0Z3	Detachment at Right 1st Toe, Low, Open Approach
0Y6Q0Z0	Detachment at Left 1st Toe, Complete, Open Approach
0Y6Q0Z1	Detachment at Left 1st Toe, High, Open Approach
0Y6Q0Z2	Detachment at Left 1st Toe, Mid, Open Approach
0Y6Q0Z3	Detachment at Left 1st Toe, Low, Open Approach
0Y6R0Z0	Detachment at Right 2nd Toe, Complete, Open Approach
0Y6R0Z1	Detachment at Right 2nd Toe, High, Open Approach
0Y6R0Z2	Detachment at Right 2nd Toe, Mid, Open Approach
0Y6R0Z3	Detachment at Right 2nd Toe, Low, Open Approach
0Y6S0Z0	Detachment at Left 2nd Toe, Complete, Open Approach
0Y6S0Z1	Detachment at Left 2nd Toe, High, Open Approach
0Y6S0Z2	Detachment at Left 2nd Toe, Mid, Open Approach
0Y6S0Z3	Detachment at Left 2nd Toe, Low, Open Approach
0Y6T0Z0	Detachment at Right 3rd Toe, Complete, Open Approach
0Y6T0Z1	Detachment at Right 3rd Toe, High, Open Approach
0Y6T0Z2	Detachment at Right 3rd Toe, Mid, Open Approach
0Y6T0Z3	Detachment at Right 3rd Toe, Low, Open Approach
0Y6U0Z0	Detachment at Left 3rd Toe, Complete, Open Approach
0Y6U0Z1	Detachment at Left 3rd Toe, High, Open Approach
0Y6U0Z2	Detachment at Left 3rd Toe, Mid, Open Approach
0Y6U0Z3	Detachment at Left 3rd Toe, Low, Open Approach
0Y6V0Z0	Detachment at Right 4th Toe, Complete, Open Approach
0Y6V0Z1	Detachment at Right 4th Toe, High, Open Approach
0Y6V0Z2	Detachment at Right 4th Toe, Mid, Open Approach
0Y6V0Z3	Detachment at Right 4th Toe, Low, Open Approach
0Y6W0Z0	Detachment at Left 4th Toe, Complete, Open Approach
0Y6W0Z1	Detachment at Left 4th Toe, High, Open Approach
0Y6W0Z2	Detachment at Left 4th Toe, Mid, Open Approach
0Y6W0Z3	Detachment at Left 4th Toe, Low, Open Approach
0Y6X0Z0	Detachment at Right 5th Toe, Complete, Open Approach
0Y6X0Z1	Detachment at Right 5th Toe, High, Open Approach
0Y6X0Z2	Detachment at Right 5th Toe, Mid, Open Approach
0Y6X0Z3	Detachment at Right 5th Toe, Low, Open Approach
0Y6Y0Z0	Detachment at Left 5th Toe, Complete, Open Approach
0Y6Y0Z1	Detachment at Left 5th Toe, High, Open Approach
0Y6Y0Z2	Detachment at Left 5th Toe, Mid, Open Approach
0Y6Y0Z3	Detachment at Left 5th Toe, Low, Open Approach
0Y6M0Z4	Detachment at Right Foot, Complete 1st Ray, Open Approach
0Y6M0Z5	Detachment at Right Foot, Complete 2nd Ray, Open Approach
0Y6M0Z6	Detachment at Right Foot, Complete 3rd Ray, Open Approach
0Y6M0Z7	Detachment at Right Foot, Complete 4th Ray, Open Approach
0Y6M0Z8	Detachment at Right Foot, Complete 5th Ray, Open Approach
0Y6M0Z9	Detachment at Right Foot, Partial 1st Ray, Open Approach
0Y6M0ZB	Detachment at Right Foot, Partial 2nd Ray, Open Approach
0Y6M0ZC	Detachment at Right Foot, Partial 3rd Ray, Open Approach
0Y6M0ZD	Detachment at Right Foot, Partial 4th Ray, Open Approach
0Y6M0ZF	Detachment at Right Foot, Partial 5th Ray, Open Approach

SUPPLEMENTARY DATA

0Y6N0Z4 Detachment at Left Foot, Complete 1st Ray, Open Approach
0Y6N0Z5 Detachment at Left Foot, Complete 2nd Ray, Open Approach
0Y6N0Z6 Detachment at Left Foot, Complete 3rd Ray, Open Approach
0Y6N0Z7 Detachment at Left Foot, Complete 4th Ray, Open Approach
0Y6N0Z8 Detachment at Left Foot, Complete 5th Ray, Open Approach
0Y6N0Z9 Detachment at Left Foot, Partial 1st Ray, Open Approach
0Y6N0ZB Detachment at Left Foot, Partial 2nd Ray, Open Approach
0Y6N0ZC Detachment at Left Foot, Partial 3rd Ray, Open Approach
0Y6N0ZD Detachment at Left Foot, Partial 4th Ray, Open Approach
0Y6N0ZF Detachment at Left Foot, Partial 5th Ray, Open Approach

SUPPLEMENTARY DATA

Supplementary Table 3. 1-year outcomes following hallux amputation vs. amputation of other toes, FY2016

Outcomes	Hallux amputated (n=772)		Toe other than hallux amputated (n=1233)		p-value
	N	%	N	%	
Subsequent ipsilateral amputation					<0.001
Yes	325	42.1	391	31.7	
No	447	57.9	842	68.3	
Number of days until subsequent ipsilateral amputation*					0.039
≤30	153	47.1	212	54.2	
31-182	132	40.6	123	31.5	
183-365	40	12.3	56	14.3	
Ipsilateral amputation level					0.019
Minor	675	87.4	1120	90.8	
Major	97	12.6	113	9.2	
Death					0.60
Yes	99	12.9	143	11.6	
No	673	87.2	1090	88.4	

* Among those who underwent a subsequent ipsilateral amputation

SUPPLEMENTARY DATA

Supplementary Table 4. Characteristics among those whose initial amputation involved a hallux or toe other than hallux, FY2016

Characteristics	Hallux amputated (n=772)		Toe other than hallux amputated (n=1233)		p-value
	N	%	N	%	
Age (years)					0.62
<55	77	11.2	132	12.2	
55-64	234	34.2	364	33.6	
65-74	340	49.6	545	50.4	
≥75	34	5.0	41	3.8	
Sex					0.85
Female	9	1.2	12	1.0	
Male	763	98.8	1,221	99.0	
Race					<0.001
American Indian or Alaska Native	15	1.9	20	1.6	
Asian or Pacific Islander	6	0.8	15	1.2	
Black or African American	196	25.4	219	17.8	
White	546	70.7	970	78.7	
Ethnicity					0.63
Hispanic or Latino/a	39	5.1	70	5.7	
Not Hispanic or Latino/a	711	92.1	1,131	91.7	
Marital status					0.21
Married	328	42.5	553	44.8	
Separated/Divorced	281	36.4	403	32.7	
Widowed	69	8.9	98	7.9	
Single	93	12.0	173	14.0	
Enrollment priority					0.62
Co-payments required	103	13.3	154	12.5	
Low income	268	34.7	448	36.3	
Moderate disability	116	15.0	164	13.3	
Severe disability	283	36.7	466	37.8	
Gagne Index					<0.001
≤0 (fewer comorbidities)	218	28.2	456	37.0	
1-2	221	28.6	307	24.9	
3-4	165	21.4	237	19.2	
>4 (more comorbidities)	168	21.8	233	18.9	

Numbers do not sum to total because of missing information about characteristics

SUPPLEMENTARY DATA

Supplementary Table 5. Level of amputation on the contralateral limb among VA patients with diabetes by whether they had a subsequent ipsilateral minor or major amputation, death, or neither in the 12 months after initial toe/ray amputation

Contralateral amputation in 12 months after toe/ray amputation	Subsequent major ipsilateral amputation (n=1,821)		Subsequent minor ipsilateral amputation (n=4,253)		Death and no subsequent ipsilateral amputation (n=1,344)		No subsequent ipsilateral amputation and no death (n=10,368)	
	N	%	N	%	N	%	N	%
Minor	95	5.2	321	7.5	45	3.3	518	5.0
Major	229	12.6	67	1.6	16	1.2	113	1.1
No contralateral amputation	1,497	82.2	3,865	90.9	1,283	95.5	9,737	93.9

Note: 464 (3%) patients had a minor ipsilateral amputation and died; 356 (2%) patients had a major ipsilateral amputation and died

SUPPLEMENTARY DATA

Natural language processing methods for determination of laterality

We used natural language processing to determine laterality in these individuals by searching for medical documents (e.g., notes) associated with the procedure. The medical documents were categorized into four groups based on the type and date of the note; text searches were done hierarchically (group 0 first, then groups 1-3) and iteratively until relevant textual information was found. Group 0 (n=2618, 53%) included procedures with operative notes written on the same date; group 1 (n=364, 7%) included procedures with operative notes written one day before or after the procedure date; group 2 (n=317, 6%) included procedures with notes (operative or other) within 7 days; group 3 (n=1231, 25%) included procedures with notes up to 30 days prior and 90 days after the procedure date. There were 435 procedures (9%) with no notes within these timeframes. We employed notes associated with procedure codes that included laterality information to train, build, and test a classifier. To create snippets of specified length that were most relevant to the query, we used the Veterans Indexed Search for Analytics (VISA) tool (Hammond, International, & 2014, n.d.) which is based on the Lucene search engine ("Apache Lucene Core," 2018) and utilizes an index of clinical notes. We then exported these snippets to the Waikato Environment for Knowledge Analysis (WEKA; Waikato University, Hamilton, New Zealand) tool (an open-source collection of machine learning algorithms for data mining tasks written in Java (Hall et al., 2014)). We employed J48 decision-tree classifiers to train, build, and test the documents in each group.

SUPPLEMENTARY DATA

References

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Hammond, K., International, R. L.-2014 47th H., & 2014, undefined. (n.d.). Application of a hybrid text mining approach to the study of suicidal behavior in a large population. *Ieeexplore.Ieee.Org*. Retrieved from <https://ieeexplore.ieee.org/abstract/document/6758921/>

SUPPLEMENTARY DATA

Spatial autocorrelation approach and results

Approach

The Local Moran's I was calculated for each market and used to identify the cores of clusters for both high risk of subsequent amputation (high-high) and low risk of subsequent amputation (low-low) for any subsequent amputation, and subsequent major amputation only (Anselin, 1995).

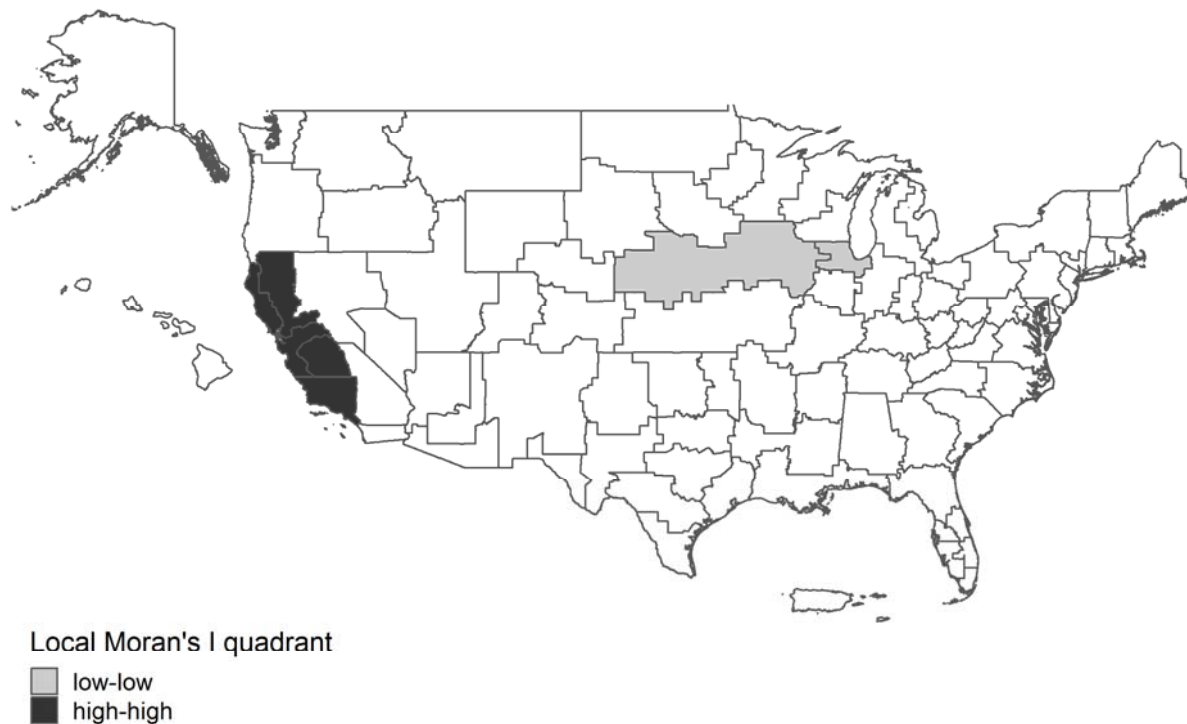
Results

High-high” clusters for subsequent major or minor LEA were in California while “low-low” clusters were in Northern Illinois, Iowa and Nebraska. We identified high-high clusters (but not low-low clusters) for subsequent major amputation in the Southeast (in parts of Georgia, South Carolina, North Carolina, Mississippi, Louisiana, and Oklahoma).

Anselin, L. (1995). Local Indicators of Spatial Association—LISA. *Geographical Analysis*, 27(2), 93–115. <https://doi.org/10.1111/j.1538-4632.1995.tb00338.x>

SUPPLEMENTARY DATA

Supplementary Figure 1. Local Moran's I high-high and low-low for 12-month age- and race-adjusted risk of subsequent ipsilateral amputation following an initial toe/ray amputation in patients with diabetes



SUPPLEMENTARY DATA

Supplementary Figure 2. Local Moran's I high-high and low-low for 12-month age- and race-adjusted risk of subsequent major ipsilateral amputation following an initial toe/ray amputation in patients with diabetes

