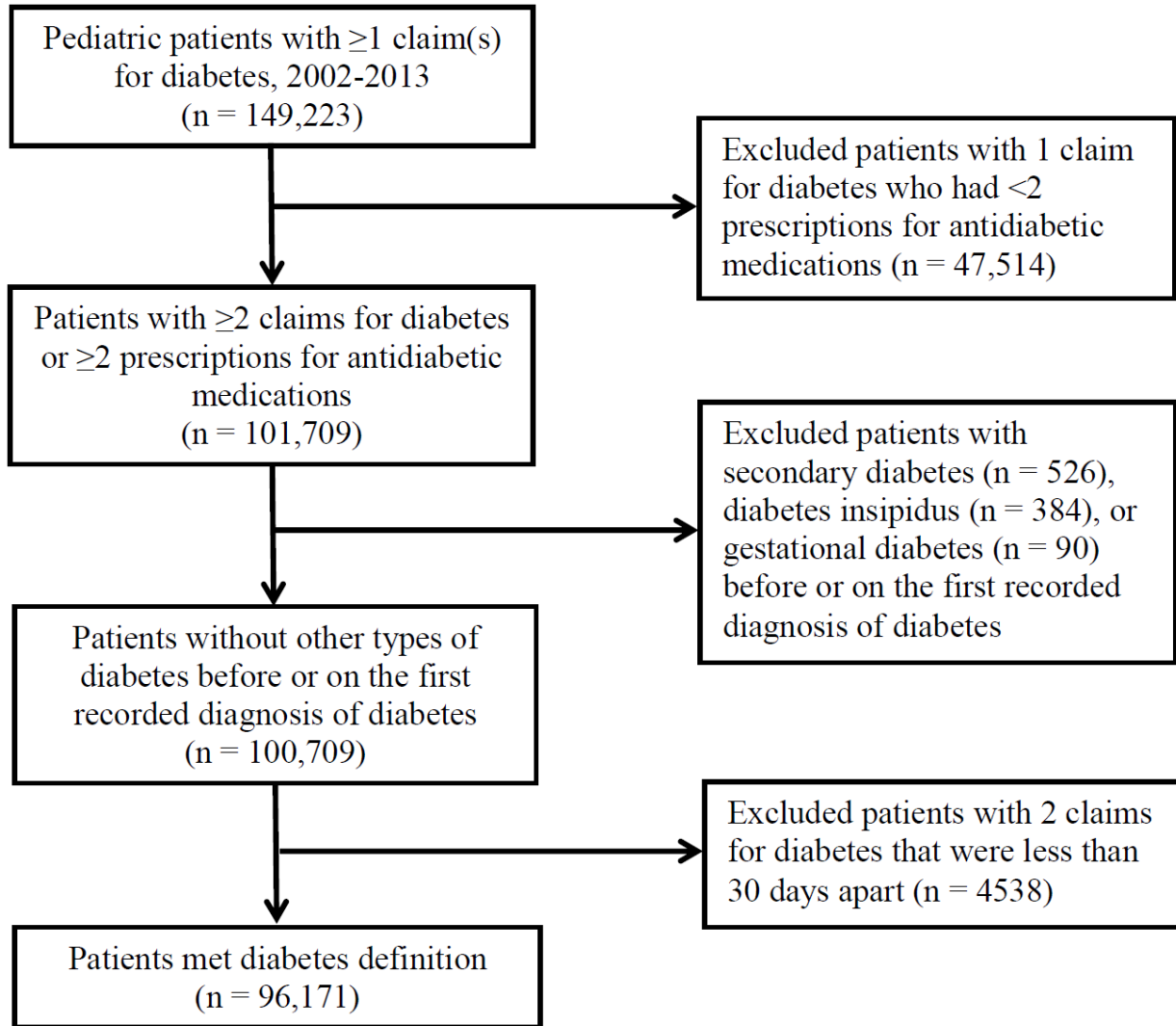
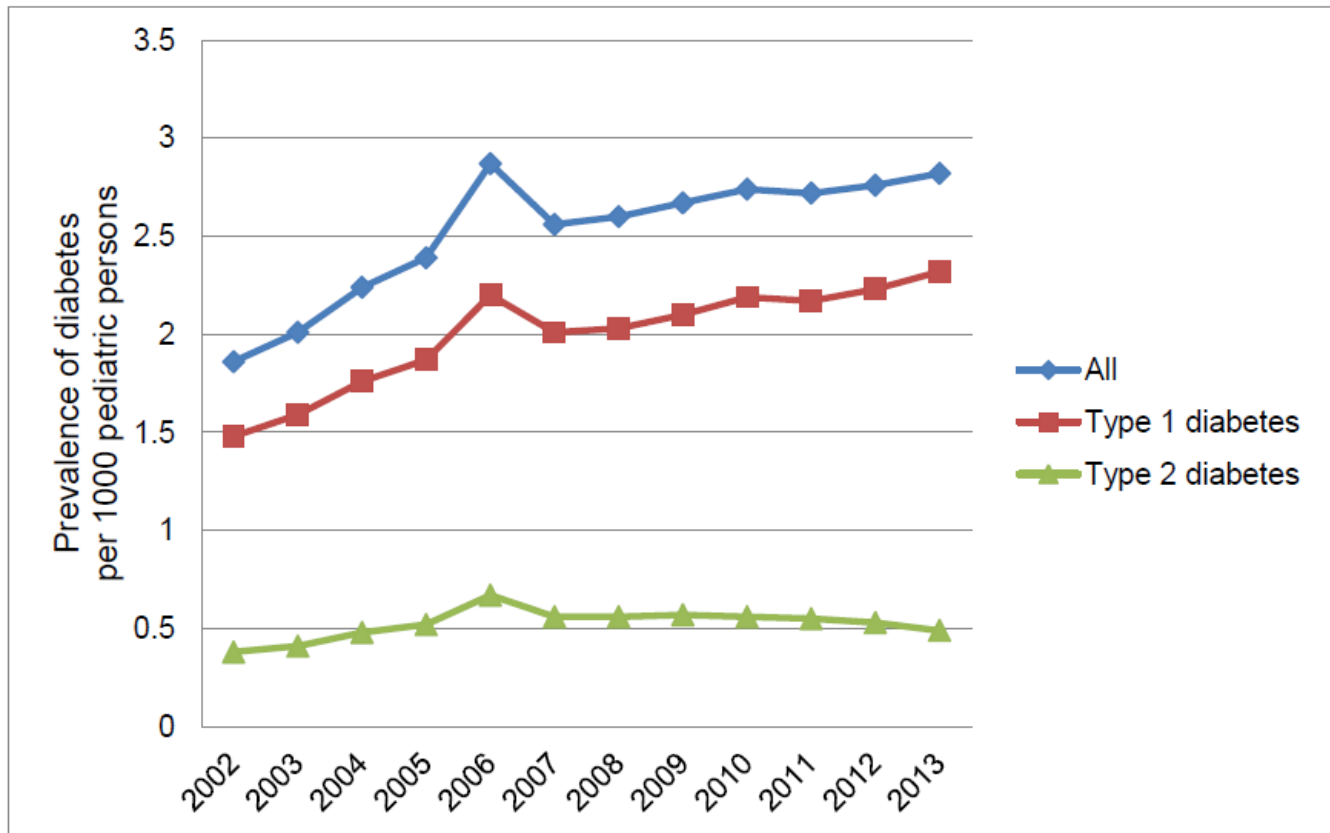


Supplementary Figure S1. Selection of Pediatric Diabetes Patients



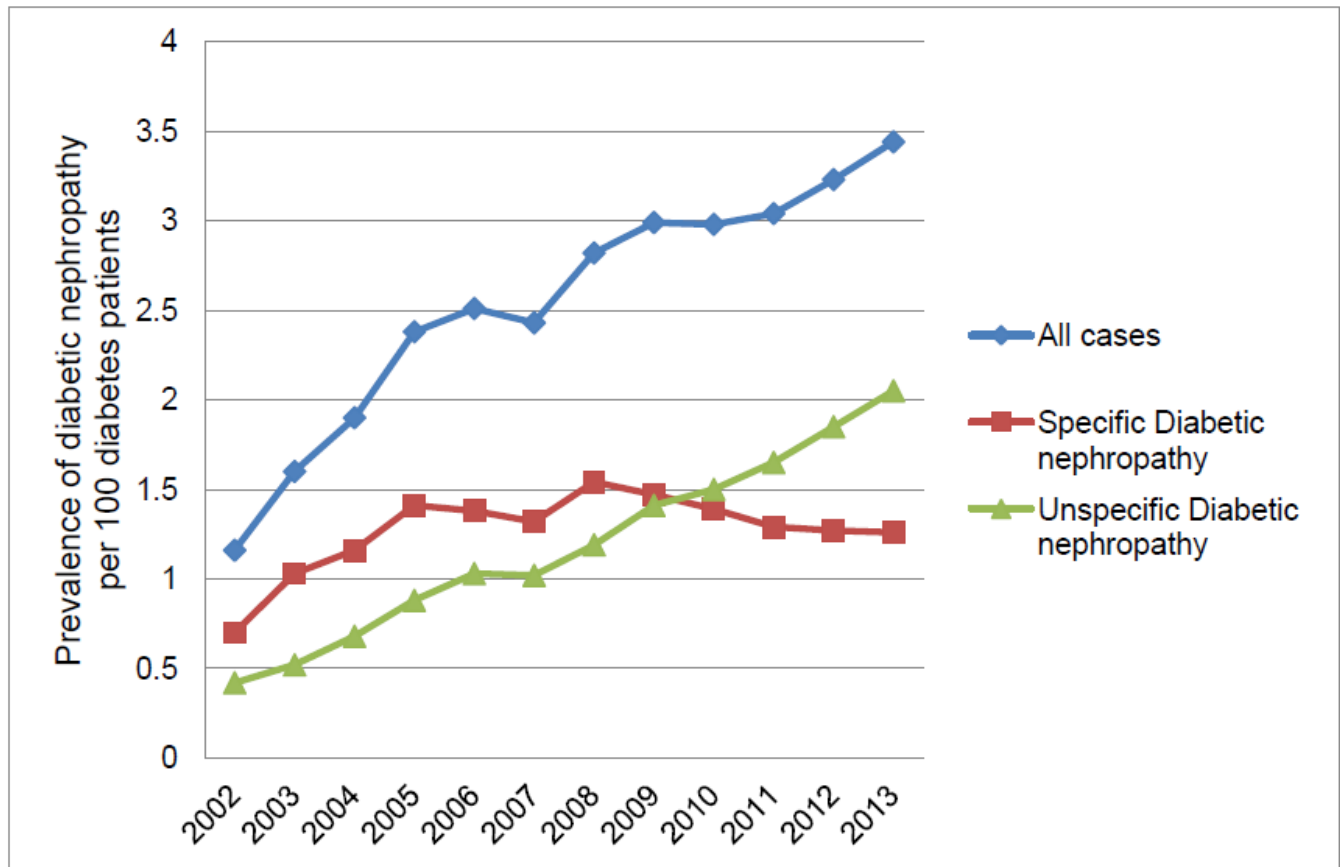
SUPPLEMENTARY DATA

Supplementary Figure S2. Annual prevalence of pediatric diabetes (per 1000) overall and stratified by type of diabetes, U.S. MarketScan Data, 2002–2013



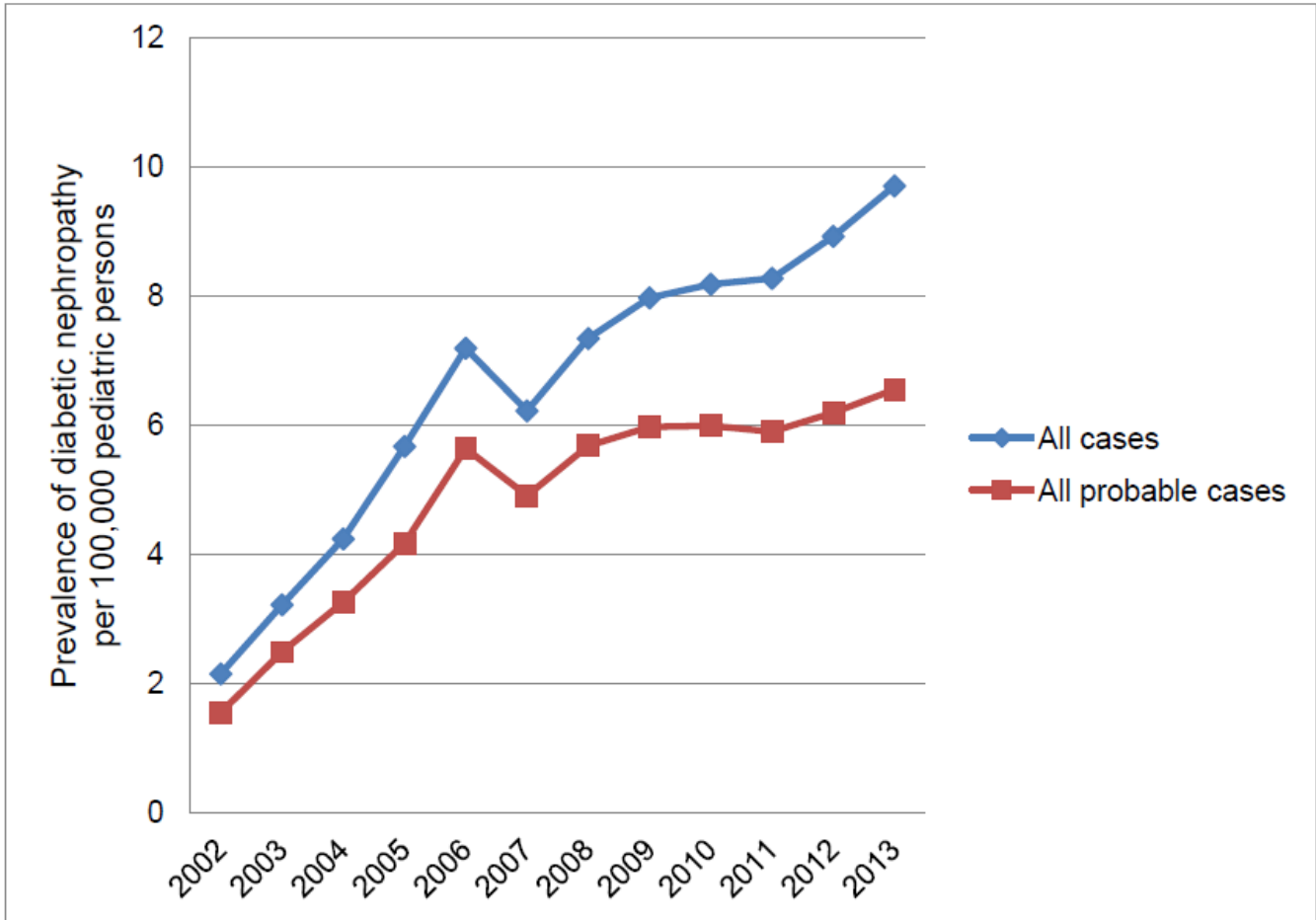
SUPPLEMENTARY DATA

Supplementary Figure S3. Annual prevalence of diabetic nephropathy per 100 pediatric diabetes patients overall and stratified by type of diabetic nephropathy, U.S. MarketScan Data, 2002–2013



SUPPLEMENTARY DATA

Supplementary Figure S4. Annual prevalence of diabetic nephropathy per 100,000 pediatric persons for all cases and probable cases only, U.S. MarketScan Data, 2002–2013



SUPPLEMENTARY DATA

Supplementary Table S1. Codes for diabetes

Diagnosis codes	ICD-9-CM	CPT	HCPC
Diabetes	250.00 – 250.93, 357.2, 362.01– 362.07, 366.41, 648.00-648.04, 962.3, 995.23, 996.57, E932.3, V45.85, V53.91, V58.67, V65.46	5010F, 81506, 92227, 92228	A4230 – A4232, A9274, E0784, G9147, J1815, J1817, S5550 – S5553, S5560, S5561, S5565, S5566, S5570, S5571, S8490, S9145, S9353, A5500, A5501, A5503 – A5508, A5510, A5512, A5513, G0108, G0109, G0245 – G0247, S9140, S9141, S9455, S9460, S9465

SUPPLEMENTARY DATA

Supplementary Table S2. Codes for identification of diabetic nephropathy

Diagnosis codes	ICD-9-CM	CPT	HCPC
Diabetic nephropathy	250.4, 583.81	n/a	n/a
Nephropathy	583.0-583.7; 583.89; 583.9	n/a	n/a
Chronic kidney disease stage 1, 2, 3, 4, 5, unspecified, or end stage renal disease	585.1-585.6, 585.9	n/a	n/a
Proteinuria	791.0	3060F, 3062F	n/a
Renal dialysis or kidney transplant	V42.0, V45.11, V45.12, 996.73, 996.81, E870.2, E871.2, E872.2, E874.2, E879.1	0505F, 0507F, 4053F – 4055F, 90935, 90937, 90940, 90945, 90947, 90963, 90964, 90965, 36147, 36148, 36800, 36810, 36815, 36818 – 36820, 36821, 36831, 36832, 90957 – 90959, 90969, 90997, 90999, 99512, 50300, 50320, 50340, 50360, 50365, 50370, 50380, 3066F	A4690, G0257, G9231, J0882, J0886, J0887, J0890, Q4081, S9339

SUPPLEMENTARY DATA

Supplementary Table S3. Codes for conditions that may raise the risk of nephropathy

Diagnosis codes	ICD-9-CM
Genetic kidney disease	753.0, 753.1, 753.3
Chromosomal anomalies	758.0 – 758.9
Kidney cancer	189.0, 189.1
Protein metabolism disorder	273.0 – 273.4, 273.8, 273.9
Vesicoureteral reflux	593.70 – 593.73
Hypertensive chronic kidney disease	403.0 , 403.1, 403.9, 404.0, 404.1, 404.9, 405.01, 405.11, 405.91
Amyloidosis	277.30, 277.31, 277.39
Polyarteritis nodosa	446.0
Goodpasture's syndrome	446.21
Wegener's granulomatosis	446.4
Systemic lupus erythematosus	710.0
Cystic fibrosis	277.00 – 277.03, 277.09
Multiple sclerosis	340
Infectious diseases	042, 084.9, 098.19, 016.0, 571.40 – 571.42, 571.49, 571.5, 571.6, 571.8, 571.9
Other major non-kidney organ transplant	996.82, 996.83, 996.85, 996.87, V42.1, V42.7, V42.81, V42.82, V58.44
Urinary tract disorders	590.0 – 590.3, 590.8, 590.9, 592.0, 592.1, 592.9, 599.0, 599.60, 599.69, 599.70 – 599.72, 580.0, 580.4, 580.81, 580.89, 580.9, 581.0 – 581.3, 581.81, 581.89, 581.9, 582.0 – 582.2, 582.4, 582.81, 582.89, 582.9
Septicemia/sepsis	038.0 – 038.4, 038.8, 038.9, 040.82, 785.52, 995.9
Heart failure	428.0 – 428.4, 428.9
Other conditions that may increase urinary albumin excretion	283.11, 333.92, 446.6, 728.88, V58.11

SUPPLEMENTARY DATA

Supplementary Table S4. Supporting codes for diagnosis of diabetic nephropathy

Name	ICD-9-CM	CPT	HCPC
Test for albuminuria	n/a	81000 – 81003, 81005, 81015, 82042 – 82044, 84156	n/a
Renal dialysis or kidney transplant	V42.0, V45.11, V45.12, 996.73, 996.81, E870.2, E871.2, E872.2, E874.2, E879.1	0505F, 0507F, 4053F – 4055F, 90935, 90937, 90940, 90945, 90947, 90963, 90964, 90965, 36147, 36148, 36800, 36810, 36815, 36818 – 36820, 36821, 36831, 36832, 90957 – 90959, 90969, 90997, 90999, 99512, 50300, 50320, 50340, 50360, 50365, 50370, 50380, 3066F	A4690, G0257, G9231, J0882, J0886, J0887, J0890, Q4081, S9339
Diet intervention	V65.3	n/a	n/a
Diabetic retinopathy	362.01 – 362.07, 250.50 – 250.53	n/a	n/a
ACE inhibitor/ARB therapy		4010F	

SUPPLEMENTARY DATA

Supplementary Table S5. Type of diabetes stratified annual prevalence of diabetes in pediatric population by age and sex, U.S. MarketScan Data, 2002-2003

Year	Prevalence of diabetes per 1000 pediatric persons (95% CI)					
	Age (years)*				Sex†	
	< 2	2 – < 6	6 – < 12	12 – < 18	Male	Female
Type 1 diabetes						
2002	0.08 (0.05-0.12)	0.56 (0.50-0.63)	1.30 (1.23-1.37)	2.61 (2.51-2.71)	1.51 (1.45-1.57)	1.45 (1.39-1.52)
2003	0.06 (0.04-0.09)	0.62 (0.57-0.67)	1.44 (1.38-1.50)	2.79 (2.71-2.87)	1.62 (1.57-1.68)	1.56 (1.51-1.62)
2004	0.05 (0.04-0.07)	0.69 (0.64-0.74)	1.62 (1.56-1.68)	3.05 (2.98-3.13)	1.82 (1.77-1.87)	1.70 (1.65-1.75)
2005	0.05 (0.04-0.07)	0.64 (0.59-0.69)	1.77 (1.71-1.83)	3.26 (3.19-3.34)	1.92 (1.87-1.97)	1.81 (1.76-1.86)
2006	0.05 (0.03-0.07)	0.71 (0.66-0.77)	2.08 (2.01-2.16)	3.84 (3.74-3.93)	2.30 (2.24-2.36)	2.10 (2.04-2.16)
2007	0.04 (0.03-0.06)	0.56 (0.52-0.60)	1.90 (1.84-1.95)	3.57 (3.50-3.64)	2.09 (2.04-2.13)	1.92 (1.88-1.97)
2008	0.05 (0.04-0.06)	0.53 (0.50-0.57)	1.94 (1.89-1.99)	3.65 (3.59-3.72)	2.11 (2.07-2.16)	1.95 (1.91-1.99)
2009	0.04 (0.03-0.05)	0.55 (0.52-0.58)	1.98 (1.93-2.03)	3.79 (3.73-3.86)	2.18 (2.14-2.22)	2.01 (1.97-2.05)
2010	0.04 (0.03-0.05)	0.55 (0.52-0.59)	2.01 (1.97-2.06)	3.97 (3.91-4.03)	2.26 (2.22-2.30)	2.11 (2.07-2.14)
2011	0.05 (0.04-0.06)	0.53 (0.51-0.56)	1.93 (1.89-1.97)	4.04 (3.98-4.10)	2.25 (2.22-2.29)	2.09 (2.06-2.13)
2012	0.04 (0.03-0.05)	0.52 (0.49-0.54)	1.90 (1.86-1.94)	4.22 (4.16-4.28)	2.29 (2.26-2.33)	2.16 (2.13-2.20)
2013	0.03 (0.02-0.04)	0.54 (0.50-0.57)	1.90 (1.85-1.95)	4.46 (4.39-4.52)	2.40 (2.36-2.45)	2.24 (2.20-2.28)
Type 2 diabetes						
2002	n/a‡	0 (0-0.01)	0.22 (0.19-0.25)	0.86 (0.81-0.92)	0.30 (0.27-0.33)	0.47 (0.44-0.51)
2003	0 (0-0.01)	0.01 (0-0.02)	0.19 (0.17-0.22)	0.97 (0.92-1.02)	0.32 (0.30-0.35)	0.51 (0.48-0.54)
2004	0 (0-0.01)	0.01 (0-0.02)	0.22 (0.20-0.24)	1.12 (1.07-1.16)	0.37 (0.34-0.39)	0.59 (0.56-0.62)
2005	0 (0-0.01)	0.01 (0-0.01)	0.22 (0.20-0.24)	1.23 (1.19-1.28)	0.39 (0.37-0.42)	0.64 (0.61-0.67)
2006	n/a‡	0.01 (0-0.02)	0.27 (0.24-0.30)	1.61 (1.55-1.68)	0.51 (0.48-0.54)	0.84 (0.80-0.88)
2007	n/a‡	0.01 (0-0.01)	0.22 (0.20-0.24)	1.36 (1.31-1.40)	0.43 (0.41-0.45)	0.69 (0.66-0.72)
2008	0 (0-0.01)	0 (0-0.01)	0.20 (0.18-0.22)	1.41 (1.37-1.45)	0.44 (0.42-0.46)	0.70 (0.67-0.72)
2009	0 (0-0.01)	0 (0-0.01)	0.20 (0.18-0.21)	1.42 (1.38-1.46)	0.44 (0.42-0.46)	0.70 (0.68-0.73)
2010	0 (0-0.01)	0 (0-0.01)	0.19 (0.17-0.20)	1.39 (1.36-1.43)	0.43 (0.42-0.45)	0.69 (0.67-0.71)
2011	0 (0-0.01)	0 (0-0.01)	0.18 (0.17-0.20)	1.37 (1.33-1.40)	0.42 (0.41-0.44)	0.68 (0.66-0.70)
2012	0 (0-0.01)	0 (0-0.01)	0.15 (0.14-0.16)	1.35 (1.32-1.39)	0.41 (0.39-0.42)	0.66 (0.64-0.68)
2013	0 (0-0.01)	0 (0-0.01)	0.13 (0.11-0.14)	1.25 (1.22-1.29)	0.38 (0.36-0.39)	0.61 (0.59-0.63)

*P values <0.05 for type 1 and type 2 diabetes separately for years 2002 through 2013, Chi-square test

†P values <0.05 for type 1 diabetes for years 2004 through 2013, for type 2 diabetes for years 2002 through 2013, Chi-square test

‡n/a: not applicable because of zero case