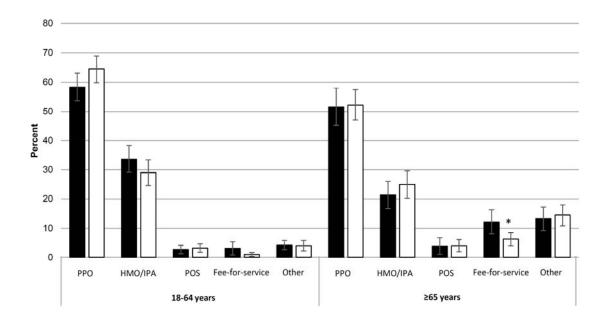
Supplementary Figure 1. Percent of type of private insurance by age among those with diabetes and private insurance. Black bars = 2009; White bars = 2016. Error bars represent 95% confidence intervals. *p<0.05, 2016 vs. 2009 PPO, Preferred provider organization; HMO/IPA, Health maintenance organization/independent practice organization; POS, Point-ofservice



Supplementary Table 1. Percent (standard error) of study population with diabetes by age, NHIS 2009 and 2016.

		Participant Characteristics						
	Age 18-	64 Years	Age ≥65 Years					
	2009	2016	2009	2016				
	N=1581	N=1723	N=1120	N=1796				
Age								
18-39	13.6 (1.18)	15.8 (1.36)	NA	NA				
40-49	25.3 (1.61)	19.2 (1.36)*	NA	NA				
50-59	39.8 (1.74)	39.6 (1.54)	NA	NA				
60-64	21.3 (1.30)	25.3 (1.37)†	NA	NA				
65-74	NA	NA	55.7 (1.82)	63.5 (1.46)*				
≥75	NA	NA	44.3 (1.82)	36.5 (1.46)*				
Sex								
Men	51.9 (1.85)	48.5 (1.61)	49.3 (1.86)	51.5 (1.55)				
Women	48.1 (1.85)	51.1 (1.61)	50.7 (1.86)	48.5 (1.55)				
Race/Ethnicity								
Non-Hispanic white	62.9 (1.59)	57.2 (1.90)*	69.9 (1.68)	67.4 (1.74)				
Non-Hispanic black	17.0 (1.15)	17.8 (1.34)	14.2 (1.13)	13.6 (1.23)				
Hispanic	15.8 (1.13)	19.0 (1.64)	10.9 (1.16)	12.6 (1.28)				
Mexican American	10.6 (0.94)	11.7 (1.42)	6.5 (0.96)	7.5 (1.06)				

N. T	2 ((2 = 2)	4.0.70.013	4.0.70.70	F 2 (0.00)
Non-Hispanic Asian	3.6 (0.78)	4.0 (0.81)	4.0 (0.69)	5.3 (0.98)
Non-Hispanic Other	0.8 (0.29)	2.0 (0.39)*	1.1 (0.49)	1.1 (0.25)
Education				
Less than high school	19.8 (1.47)	18.7 (1.39)	31.0 (1.68)	22.5 (1.26)*
High school graduate	32.8 (1.69)	28.2 (1.42)†	31.4 (1.79)	29.6 (1.36)
Greater than high school education	47.4 (1.85)	53.2 (1.52)†	37.5 (1.86)	47.9 (1.53)*
Family income				
<\$35,000	39.4 (1.66)	38.7 (1.65)	53.9 (2.03)	46.6 (1.68)*
\$35,000-\$49,999	14.9 (1.19)	11.1 (0.98)†	16.4 (1.38)	14.6 (1.19)
\$50,000-\$74,999	18.4 (1.24)	16.4 (1.22)	15.0 (1.42)	17.5 (1.26)
\$75,000-\$99,999	11.2 (1.09)	10.9 (1.03)	7.1 (1.24)	9.6 (1.09)
≥\$100,000	16.1 (1.50)	22.9 (1.47)*	7.5 (1.23)	11.8 (1.15)†
Marital status	, ,	, ,	, , ,	
Married or living with partner	65.0 (1.53)	60.9 (1.57)	58.3 (1.87)	55.8 (1.57)
Divorced or separated	16.2 (1.09)	17.0 (1.16)	11.0 (1.04)	15.4 (1.06)*
Widowed	4.1 (0.57)	3.7 (0.49)	27.7 (1.59)	23.3 (1.12)†
Never married	14.8 (1.17)	18.3 (1.29)†	3.0 (0.47)	5.5 (0.60)*
Diabetes duration (years)			,	,
<5	40.0 (1.87)	34.3 (1.64)†	24.8 (1.53)	15.6 (1.15)*
5-15	40.7 (1.62)	43.3 (1.66)	41.9 (1.87)	40.3 (1.51)
>15	19.3 (1.22)	22.4 (1.34)	33.3 (1.79)	44.2 (1.51)*
Diabetes medication		,	, ,	,
Insulin only	11.8 (1.03)	12.1 (0.92)	12.8 (1.25)	13.2 (1.00)
Oral only	55.2 (1.75)	55.7 (1.56)	61.3 (1.75)	58.2 (1.51)
Insulin and oral	14.1 (1.29)	16.4 (1.16)	13.5 (1.20)	16.9 (1.09)†
None	18.9 (1.43)	15.9 (1.15)	12.4 (1.20)	11.7 (1.02)
Hypertension	(1 -)		. ()	, ,
Yes	63.7 (1.84)	67.6 (1.53)	81.5 (1.27)	81.2 (1.20)
No	36.3 (1.84)	32.4 (1.53)	18.5 (1.27)	18.8 (1.20)
Heart condition/disease [‡]	(-10-1)	()	(3,2,7)	
Yes	21.7 (1.57)	23.1 (1.34)	41.2 (2.10)	37.4 (1.49)
No	78.3 (1.57)	76.9 (1.34)	58.8 (2.10)	62.6 (1.49)
Weak or failing kidneys§	(11 ()	, , ,		
Yes	6.5 (0.82)	6.3 (0.72)	9.7 (1.12)	11.3 (0.97)
No	93.5 (0.82)	93.7 (0.72)	90.3 (1.12)	88.7 (0.97)
Vision problems	75.5 (0.02)	75.1 (0.12)	70.3 (1.12)	00.7 (0.27)
Yes Yes	17.1 (1.38)	21.6 (1.21)†	19.3 (1.41)	21.5 (1.22)
No	82.9 (1.38)	78.4 (1.21)	80.7 (1.41)	78.5 (1.22)
Visited doctor in past 12 months	02.7 (1.30)	70.7 (1.21)	00.7 (1.41)	70.5 (1.22)
Yes	85.2 (1.17)	83.8 (1.33)	92.0 (0.97)	92.3 (0.76)
No	14.8 (1.17)	16.2 (1.33)	8.0 (0.97)	7.7 (0.76)
Visited eye doctor in past 12 months	14.0 (1.1/)	10.2 (1.33)	0.0 (0.97)	7.7 (0.70)
Yes Yes	53.4 (1.75)	53.3 (1.61)	66.6 (1.76)	71 2 (1 46)+
	\ /	46.7 (1.61)		71.3 (1.46)†
No Visited feet dector in past 12 months	46.6 (1.75)	40.7 (1.01)	33.4 (1.76)	28.7 (1.46)
Visited foot doctor in past 12 months	17.5 (1.46)	17.7 (1.20)	2(0(1(5)	20 ((1.40)
Yes	17.5 (1.46)	17.7 (1.36)	26.9 (1.65)	30.6 (1.48)
No	82.5 (1.46)	82.3 (1.36)	73.1 (1.65)	69.4 (1.48)

Supplementary Table 2. Percent (standard error) of study population with diabetes age 18-64 years by health insurance coverage, NHIS 2009 and 2016.

	Participant Characteristics					
	Health In			Insurance		
	2009	2016	2009	2016		
	N=1335	N=1560	N=246	N=157		
Age						
18-39	12.6 (1.21)	14.8 (1.38)	19.4 (3.62)	24.8 (4.71)		
40-49	25.2 (1.84)	19.2 (1.40)	25.8 (3.59)	20.5 (4.96)		
50-59	40.5 (1.93)	40.1 (1.67)	36.7 (3.69)	36.2 (5.43)		
60-64	21.8 (1.38)	25.9 (1.49)	18.1 (3.84)	18.5 (3.71)		
Sex						
Men	52.0 (2.00)	50.0 (1.73)	51.8 (3.97)	35.2 (5.11)		
Women	48.0 (2.00)	50.0 (1.73)	48.2 (3.97)	64.8 (5.11)		
Race/Ethnicity						
Non-Hispanic white	65.0 (1.73)	58.8 (1.94)	51.2 (4.79)	42.8 (6.01)		
Non-Hispanic black	17.0 (1.29)	18.0 (1.41)	16.2 (2.64)	15.5 (3.61)		
Hispanic	13.5 (1.15)	17.4 (1.65)	29.0 (4.12)	34.2 (6.00)		
Mexican American	8.9 (0.96)	10.3 (1.39)	19.7 (3.29)	25.0 (5.69)		
Non-Hispanic Asian	3.8 (0.91)	4.2 (0.82)	2.0 (0.97)	1.9 (1.80)		
Non-Hispanic Other	0.6 (0.23)	1.7 (0.34)	1.7 (1.06)	5.6 (1.78)		
Education						
Less than high school	16.7 (1.36)	17.8 (1.49)	37.5 (4.45)	25.3 (4.22)		
High school graduate	33.3 (1.83)	27.0 (1.47)	30.0 (3.77)	39.5 (5.70)		
Greater than high school education	50.0 (1.98)	55.2 (1.58)	32.5 (3.99)	35.1 (5.11)		
Family income						
<\$35,000	35.5 (1.71)	37.0 (1.70)	59.9 (4.41)	53.5 (5.96)		
\$35,000-\$49,999	13.6 (1.21)	10.5 (0.94)	21.7 (4.11)	16.5 (4.31)		
\$50,000-\$74,999	19.8 (1.43)	16.2 (1.35)	10.8 (2.28)	18.6 (4.01)		
\$75,000-\$99,999	12.7 (1.23)	11.8 (1.12)	3.5 (1.49)	2.6 (1.71)		
≥\$100,000	18.4 (1.72)	24.4 (1.53)	4.0 (1.52)	8.8 (4.37)		
Marital status						
Married or living with partner	66.1 (1.68)	61.3 (1.64)	58.6 (4.84)	57.2 (5.06)		
Divorced or separated	15.8 (1.15)	16.9 (1.19)	18.3 (3.50)	19.2 (3.59)		
Widowed	4.1 (0.62)	4.0 (0.54)	4.0 (1.54)	1.8 (0.84)		
Never married	14.0 (1.22)	17.9 (1.37)	19.2 (3.53)	21.8 (4.35)		
Diabetes duration (years)						
<5	38.1 (2.06)	34.1 (1.72)	50.3 (4.02)	36.4 (5.21)		
5-15	41.9 (1.79)	42.4 (1.68)	34.0 (4.06)	51.1 (5.63)		
>15	20.0 (1.33)	23.5 (1.45)	15.7 (3.62)	12.6 (2.95)		
Diabetes medication						

^{*} p<0.01, 2016 vs. 2009 † p<0.05, 2016 vs. 2009 ‡ Includes coronary heart disease, angina pectoris, heart attack, other heart condition

[§] Weak or failing kidneys does not include kidney stones, bladder infections, or incontinence

Trouble seeing even with glasses or contacts

Insulin only	11.9 (1.11)	12.4 (1.00)	11.1 (2.54)	9.2 (2.31)
Oral only	55.0 (1.87)	55.6 (1.65)	56.2 (4.02)	55.4 (5.52)
Insulin and oral	15.1 (1.43)	17.3 (1.27)	8.6 (2.36)	8.2 (2.26)
None	18.0 (1.55)	14.7 (1.12)	24.0 (3.28)	27.2 (5.21)
Hypertension				
Yes	65.2 (1.93)	68.7 (1.62)	55.3 (4.18)	58.8 (5.63)
No	34.8 (1.93)	31.3 (1.62)	44.7 (4.18)	41.2 (5.63)
Heart condition/disease [‡]				
Yes	23.2 (1.72)	24.0 (1.36)	13.5 (2.61)	16.1 (4.95)
No	76.8 (1.72)	76.0 (1.36)	86.5 (2.61)	83.9 (4.95)
Weak or failing kidneys§				
Yes	6.7 (0.87)	6.6 (0.87)	5.8 (2.04)	4.2 (1.35)
No	93.3 (0.87)	93.4 (0.79)	94.2 (2.04)	95.8 (1.35)
Vision problems				
Yes	16.5 (1.55)	21.4 (1.29)	20.6 (3.20)	24.1 (5.11)
No	83.5 (1.55)	78.6 (1.29)	79.4 (3.20)	75.9 (5.11)
Visited doctor in past 12 months				
Yes	87.9 (1.19)	86.0 (1.29)	69.6 (3.58)	64.6 (5.16)
No	12.1 (1.19)	14.0 (1.29)	30.4 (3.58)	35.4 (5.16)
Visited eye doctor in past 12 months				
Yes	58.5 (1.87)	55.9 (1.67)	24.4 (3.18)	29.1 (4.49)
No	41.5 (1.87)	44.1 (1.67)	75.6 (3.18)	70.9 (4.49)
Visited foot doctor in past 12 months				
Yes	19.4 (1.65)	18.3 (1.43)	6.9 (3.07)	12.5 (3.44)
No	80.6 (1.65)	81.7 (1.43)	93.1 (3.07)	87.5 (3.44)

NA, not applicable

^{*}p<0.01, 2016 vs. 2009

† p<0.05, 2016 vs. 2009

‡ Includes coronary heart disease, angina pectoris, heart attack, other heart condition

§ Weak or failing kidneys does not include kidney stones, bladder infections, or incontinence

Trouble seeing even with glasses or contacts

Supplementary Table 3. Percent (standard error) of health insurance coverage among adults without diabetes by age, 2009 and 2016

	Prevalence of Health Insurance Coverage						
	Age 18-0	64 Years	Age ≥65 Years				
	2009	2016	2009	2016			
	N=20,639	N=22,348	N=4369	N=7091			
Total	78.3 (0.44)	88.3 (0.38)*	99.2 (0.17)	99.2 (0.16)			
Age	, ,	Ì	, ,	, ,			
18-39	72.8 (0.64)	86.1 (0.52)*	NA	NA			
40-49	79.6 (0.74)	87.4 (0.68)*	NA	NA			
50-59	86.5 (0.71)	92.0 (0.51)*	NA	NA			
60-64	88.7 (0.91)	93.5 (0.78)*	NA	NA			
65-74	NA	NA	98.8 (0.29)	98.3 (0.25)			
≥75	NA	NA	99.6 (0.17)	99.7 (0.18)			
Sex			Ì	, ,			
Men	75.1 (0.66)	86.1 (0.53)*	99.4 (0.19)	99.2 (0.25)			
Women	81.4 (0.55)	90.3 (0.41)*	99.0 (0.26)	99.3 (0.21)			
Race/Ethnicity							
Non-Hispanic white	83.9 (0.48)	91.8 (0.32)*	99.7 (0.13)	99.7 (0.09)			
Non-Hispanic black	74.5 (1.10)	86.2 (0.92)*	97.1 (1.44)	98.5 (0.66)			
Hispanic	56.1 (1.18)	76.0 (1.27)*	97.1 (0.84)	96.7 (1.44)			
Mexican American	52.5 (1.37)	71.9 (1.79)*	97.7 (1.09)	98.3 (0.84)			
Non-Hispanic Asian	82.6 (1.43)	92.7 (1.05)*	94.4 (1.93)	99.3 (1.93)			
Non-Hispanic Other	61.7 (4.54)	80.7 (2.85)*	100.0 (0)	96.4 (3.55)			
Education							
Less than high school	56.0 (1.39)	69.6 (1.65)*	98.0 (0.59)	98.4 (0.61)			
High school graduate	71.6 (0.89)	84.0 (0.78)*	99.8 (0.09)	99.5 (0.22)			
Greater than high school education	86.1 (0.44)	92.9 (0.29)*	99.2 (0.25)	99.3 (0.21)			
Family income							
<\$35,000	60.4 (0.82)	77.2 (0.90)*	99.2 (0.21)	99.3 (0.21)			
\$35,000-\$49,999	72.2 (1.15)	82.2 (1.11)*	99.0 (0.49)	99.3 (0.47)			
\$50,000-\$74,999	82.0 (0.87)	89.7 (0.67)*	98.8 (0.71)	99.3 (0.53)			
\$75,000-\$99,999	90.6 (0.88)	94.7 (0.59)*	99.9 (0.09)	98.6 (0.86)			
≥\$100,000	94.3 (0.55)	96.9 (0.35)*	98.9 (0.75)	99.8 (0.24)			
Marital status							
Married or living with partner	82.0 (0.52)	89.6 (0.41)*	99.3 (0.21)	99.4 (0.18)			
Divorced or separated	74.0 (2.62)	84.4 (0.93)*	99.5 (0.23)	98.2 (0.78)			
Widowed	79.6 (2.62)	87.4 (1.92)†	98.8 (0.43)	99.8 (0.13)			
Never married	71.2 (0.88)	86.7 (0.69)*	98.9 (0.57)	97.4 (1.29)			
Hypertension							
Yes	84.1 (0.70)	91.3 (0.55)*	99.1 (0.25)	99.3 (0.21)			
No	76.9 (0.50)	87.5 (0.44)*	99.2 (0.23)	99.1 (0.26)			
Heart condition/disease [‡]							
Yes	83.8 (1.20)	89.4 (1.04)*	99.7 (0.16)	99.9 (0.11)			
No	77.9 (0.46)	88.2 (0.39)*	99.0 (0.23)	99.0 (0.22)			
Weak or failing kidneys [§]							

Yes	75.3 (4.63)	91.0 (2.59)*	99.4 (0.65)	98.8 (0.85)
No	78.3 (0.44)	88.2 (0.38)*	99.2 (0.18)	99.3 (0.16)
Vision problems				
Yes	74.8 (1.77)	88.4 (0.96)*	99.8 (0.12)	98.3 (0.74)
No	786. (0.44)	88.3 (0.40)*	99.1 (0.20)	99.4 (0.15)
Visited doctor in past 12 months				
Yes	87.2 (0.40)	93.6 (0.32)*	99.4 (0.16)	99.3 (0.18)
No	63.8 (0.80)	78.4 (0.73)*	97.9 (0.73)	98.6 (0.47)
Visited eye doctor in past 12 months				
Yes	89.2 (0.51)	94.8 (0.31)*	99.4 (0.24)	99.5 (0.18)
No	73.0 (0.55)	84.7 (0.51)*	98.8 (0.27)	98.8 (0.31)
Visited foot doctor in past 12 months				
Yes	93.2 (0.89)	96.1 (0.75)†	99.7 (0.22)	100.0 (0)
No	77.6 (0.45)	87.9 (0.39)*	99.1 (0.20)	99.1 (0.19)

p<0.01, 2016 vs. 2009

NA, not applicable

^{*}p<0.01, 2016 vs. 2009
†p<0.05, 2016 vs. 2009

*Includes coronary heart disease, angina pectoris, heart attack, other heart condition

*Weak or failing kidneys does not include kidney stones, bladder infections, or incontinence

Trouble seeing even with glasses or contacts

Supplementary Table 4. Prevalence [%, (SE)] of health insurance coverage and type of coverage among adults by diabetes status and age, NHIS 2009 and 2016

	Any Type		Med	licare	Pri	Private		Medicaid/other public		Benefits
	2009	2016	2009	2016	2009	2016	2009	2016	2009	2016
Diabetes										
Total	90.1 (0.91)	94.1 (0.60)*	43.0 (1.36)	48.8 (1.15)*	55.5 (1.34)	51.5 (1.16)†	16.5 (0.88)	19.1 (0.97)†	6.6 (0.64)	6.4 (0.52)
18-64 years	84.7 (1.37)	90.1 (1.03)*	13.6 (1.13)	14.3 (1.10)	58.3 (1.80)	56.3 (1.67)	19.4 (1.24)	24.3 (1.52)†	4.0 (0.55)	3.3 (0.48)
≥65 years	99.7 (0.19)	99.5 (0.19)	95.2 (0.83)	94.7 (0.70)	50.6 (1.95)	45.0 (1.64)†	11.3 (1.11)	12.2 (0.98)	11.1 (1.45)	10.4 (0.98)
No Diabetes										
Total	81.4 (0.36)	90.2 (0.32)*	16.2 (0.34)	18.8 (0.34)*	64.9 (0.48)	66.8 (0.52)*	8.8 (0.26)	13.2 (0.39)*	3.2 (0.14)	3.8 (0.19)*
18-64 years	78.3 (0.41)	88.3 (0.38)*	2.7 (0.13)	3.1 (0.14)†	65.9 (0.55)	70.5 (0.55)*	9.2 (0.29)	14.4 (0.44)*	2.6 (0.15)	2.9 (0.18)
≥65 years	99.2 (0.17)	99.2 (0.16)	94.6 (0.44)	94.4 (0.39)	58.6 (1.02)	49.3 (0.98)*	6.4 (0.44)	7.6 (0.47)	7.0 (0.44)	8.0 (0.43)

Type of health insurance is not mutually exclusive

Supplementary Table 5. Prevalence of type of private insurance by age and diabetes status among those with private insurance, NHIS 2009 and 2016

	HMC	D/IPA	PF	20	P	os	Fee-for	-service	Ot	her
	2009	2016	2009	2016	2009	2016	2009	2016	2009	2016
Diabetes										
Total	29.9 (1.81)	27.5 (1.74)	56.3 (1.88)	60.1 (1.78)	3.1 (0.66)	3.5 (0.58)	5.9 (1.00)	2.7 (0.48)*	6.9 (0.83)	7.6 (0.91)
18-64 years	33.7 (2.34)	29.0 (2.32)	58.3 (2.40)	64.4 (2.32)	2.7 (0.72)	3.2 (0.71)	3.1 (1.11)	0.87 (0.37)	4.2 (0.77)	4.0 (0.90)
≥65 years	21.3 (2.43)	24.9 (2.40)	51.6 (3.25)	52.2 (2.64)	3.9 (1.43)	4.0 (1.05)	12.1 (2.08)	6.2 (1.12)†	13.2 (2.09)	14.4 (1.81)
No Diabetes										
Total	27.8 (0.63)	27.5 (0.85)	63.1 (0.68)	63.3 (0.85)	3.5 (0.22)	3.4 (0.26)	2.6 (0.21)	1.8 (0.17)*	4.6 (0.27)	5.0 (0.30)
18-64 years	28.9 (0.67)	28.3 (0.88)	64.6 (0.71)	64.7 (0.89)	3.3 (0.22)	3.5 (0.27)	1.8 (0.20)	0.9 (0.12)*	3.1 (0.22)	3.7 (0.27)
≥65 years	19.1 (1.25)	22.2 (1.35)	52.3 (1.66)	53.1 (1.51)	5.0 (0.76)	3.2 (0.45)†	8.9 (0.87)	8.0 (0.86)	15.6 (1.35)	14.6 (1.06)

^{*}p<0.01

^{*}p<0.01

[†]p<0.05

Supplementary Table 6. Percent (standard error) of income spent on medical costs in past year among adults without diabetes, 2009 and 2016

		Family Medical Costs [†]				Private Insurance Premiums [‡]			
	Age 18-0	Age 18-64 years		55 years	Age 18-	64 years	Age ≥6	5 years	
	2009	2016	2009	2016	2009	2016	2009	2016	
	N=19,409	N=20,460	N=3831	N=5905	N=7460	N=1407	N=8899	N=2026	
Overall	2.8 (0.05)	2.5 (0.04)*	4.0 (0.11)	3.1 (0.07)*	3.8 (0.06)	4.7 (0.10)	5.2 (0.24)	4.8 (0.12)	
Family Income§, \$									
0-34,999	4.5 (0.13)	3.8 (0.12)*	5.8 (0.20)	4.8 (0.17)*	8.5 (0.04)	9.6 (0.37)	10.1 (0.24)	11.1 (0.57)	
35,000-49,999	2.9 (0.09)	2.5 (0.10)*	3.2 (0.17)	2.8 (0.15)	5.1 (0.25)	5.3 (0.28)	4.9 (0.34)	5.1 (0.28)	
50,000-74,999	2.2 (0.06)	2.2 (0.06)	2.3 (0.12)	2.5 (0.10)	3.8 (0.11)	4.8 (0.19)	3.5 (0.29)	4.0 (0.23)	
75,000-99,999	1.7 (0.05)	1.9 (0.05)*	2.0 (0.13)	1.8 (0.08)	2.8 (0.07)	4.1 (0.11)	2.4 (0.22)	2.6 (0.18)	
≥100,000	1.7 (0.03)	1.9 (0.03)	1.8 (0.10)	1.9 (0.07)	3.0 (0.09)	4.0 (0.13)	2.1 (0.29)	3.3 (0.19)	

^{*}p<0.05 for 2016 vs. 2009 within each age strata.

[†] Family medical costs are the mid-point of the following categories: \$0, <\$500, \$500-\$1,999, \$2,000-\$2,999, \$3,000-\$4,999, ≥\$5,000. Values ≥\$5,000 are coded as \$5,000. Family medical costs include out-of-pocket costs for medical and dental care and exclude health insurance premiums, over-the-counter drugs, and reimbursed costs.

[‡] Among those with private insurance. Private insurance premiums are median costs. Values ≥\$20,000 are coded as \$20,000.

[§]Denominators are the mid-point of family income category.