

Table A1 (for online publication): American Diabetes Association Guideline-Recommended Preventive Care for Diabetic Patients

Preventive Care	BRFSS Question	Coding
Daily Self-Monitoring of Blood Glucose	About how often do you check your blood for glucose or sugar?	≥ 7 / week = met the guideline; < 7 or 888 did not meet; 777, 999 or missing = excluded
Daily Self-Exam of Feet	About how often do you check your feet for any sores or irritations?	≥ 7 / week = met the guideline; < 7 or 888 did not meet; 555, 777, 999 or missing = excluded
Two or More A1c Tests Last Year	About how many times in the past 12 months has a doctor, nurse, or other health professional checked your A1c?	2 - 76 = met the guideline; 1, 77, 88, or 98 did not meet; 99 or missing = excluded
Annual Foot Exam	About how many times in the past 12 months has a health professional checked your feet for any sores or irritations?	1 - 76 = met the guideline; 88 did not meet; 77, 99, missing = excluded
Annual Eye Exam	When was the last time you had an eye exam in which the pupils were dilated?	1, 2 = met the guideline; 3, 4, or 8 = did not meet; 7, 9, missing = excluded
Annual Doctor Visit	About how many times in the past 12 months have you seen a doctor, nurse, or other health professional for your diabetes?	≥ 1 = met the guideline; 88 = did not meet; 77, 99, missing = excluded
Annual Flu Vaccination	During the past 12 months, have you had a seasonal flu shot? During the past 12 months, have you had a seasonal flu vaccine that was sprayed in your nose?	1 in either question = met the guideline; 2 in both questions = did not meet; 7, 9, missing = excluded
Self-Management Education	Have you ever taken a course or class in how to manage your diabetes yourself?	1 = met the guideline; 2 = did not meet; 7, 9, missing = excluded
Pneumococcal Vaccination	Have you ever had a pneumonia shot?	1 = met the guideline; 2 = did not meet; 7, 9, missing = excluded

Table A2 (for online publication): Number of respondents used in this study by year, county economic level, and age

County Economic Level	All adults				All adults < 65 y				All adults ≥ 65 y			
	2008	2009	2010	Total	2008	2009	2010	Total	2008	2009	2010	Total
Distressed	569	715	704	1,988	332	421	408	1,161	237	294	296	827
At-Risk	741	809	813	2,363	415	425	443	1,283	326	384	370	1,080
Transitional	3,104	2,808	2,968	8,880	1,595	1,416	1,433	4,444	1,509	1,392	1,535	4,436
Competitive/Attainment	286	388	476	1,150	151	173	219	543	135	215	257	607
Non-Appalachian	36,979	41,379	46,093	124,451	18,883	20,655	22,302	61,840	18,096	20,724	23,791	62,611
Total	41,679	46,099	51,054	138,832	21,376	23,090	24,805	69,271	20,303	23,009	26,249	69,561

* Respondents who were aged 18 years or older and had diabetes. Respondents residing in Puerto Rico, Virgin Islands, and Guam were excluded as were those who did not report county of residence.

Table A3: Fully adjusted models for guideline-recommended care receipt for annual A1c test, annual foot exam, and annual eye exam, Age \geq 65 Years*

Variables	≥ 2 Annual A1c Tests		Annual Foot Exam		Annual Eye Exam	
	OR (95% CI)	P-Value	OR (95% CI)	P-Value	OR (95% CI)	P-Value
County Economic Level [Competitive]						
Distressed	0.795 (0.560 - 1.129)	0.200	0.810 (0.548 - 1.197)	0.290	0.562 (0.383 - 0.827)	0.003
At-Risk	0.780 (0.571 - 1.064)	0.117	0.603 (0.431 - 0.844)	0.003	0.739 (0.521 - 1.048)	0.090
Transitional	0.775 (0.597 - 1.005)	0.055	0.784 (0.589 - 1.044)	0.095	0.773 (0.570 - 1.048)	0.097
Non-Appalachian	0.780 (0.612 - 0.995)	0.045	0.827 (0.633 - 1.081)	0.164	0.865 (0.650 - 1.150)	0.318
Age, y	0.967 (0.962 - 0.973)	< 0.001	0.989 (0.983 - 0.996)	0.001	1.026 (1.019 - 1.033)	< 0.001
Male	0.784 (0.722 - 0.851)	< 0.001	1.067 (0.973 - 1.171)	0.168	0.962 (0.877 - 1.054)	0.405
Race/Ethnicity [NH White]						
NH Black	0.696 (0.618 - 0.785)	< 0.001	1.667 (1.418 - 1.960)	< 0.001	1.285 (1.118 - 1.477)	< 0.001
Hispanic	0.638 (0.512 - 0.795)	< 0.001	0.820 (0.651 - 1.032)	0.091	1.003 (0.797 - 1.263)	0.978
Other/unknown	0.772 (0.655 - 0.909)	0.002	0.903 (0.739 - 1.105)	0.323	0.908 (0.749 - 1.100)	0.324
Married	1.155 (1.069 - 1.249)	< 0.001	0.992 (0.910 - 1.081)	0.851	1.119 (1.024 - 1.223)	0.013
Household Income [<\$20,000]						
\$20,000 - \$34,999	1.112 (1.003 - 1.233)	0.043	1.040 (0.928 - 1.166)	0.498	1.133 (1.011 - 1.268)	0.031
\$35,000 - \$74,999	1.194 (1.059 - 1.348)	0.004	1.086 (0.948 - 1.243)	0.234	1.315 (1.153 - 1.500)	< 0.001
\geq \$75,000	1.216 (1.023 - 1.447)	0.027	1.041 (0.868 - 1.248)	0.667	1.393 (1.151 - 1.687)	0.001
Unknown	0.915 (0.818 - 1.023)	0.119	0.995 (0.875 - 1.130)	0.933	1.150 (1.013 - 1.304)	0.030
Education [< Some high school]						

Some High School	1.107 (0.930 - 1.318)	0.251	1.138 (0.935 - 1.385)	0.196	0.907 (0.750 - 1.097)	0.313
High School Graduate or GED	1.377 (1.178 - 1.609)	< 0.001	1.226 (1.037 - 1.449)	0.017	1.143 (0.963 - 1.357)	0.126
Some College	1.606 (1.356 - 1.902)	< 0.001	1.213 (1.009 - 1.459)	0.040	1.306 (1.088 - 1.569)	0.004
College Graduate or Higher	1.979 (1.654 - 2.369)	< 0.001	1.407 (1.159 - 1.707)	0.001	1.279 (1.052 - 1.554)	0.014
Employed/Self-Employed	1.022 (0.899 - 1.161)	0.743	0.976 (0.852 - 1.117)	0.720	0.904 (0.787 - 1.040)	0.158
BMI [<25 kg/m ²]						
25 - 29.9 kg/m ²	1.112 (1.006 - 1.228)	0.037	1.253 (1.124 - 1.398)	< 0.001	1.082 (0.963 - 1.215)	0.183
>= 30 kg/m ²	1.240 (1.116 - 1.378)	< 0.001	1.308 (1.167 - 1.466)	< 0.001	1.131 (1.004 - 1.273)	0.043
Unknown	1.010 (0.824 - 1.239)	0.924	1.170 (0.917 - 1.494)	0.207	0.925 (0.725 - 1.181)	0.531
Smoking [Never]						
Past	1.089 (1.007 - 1.177)	0.032	1.006 (0.921 - 1.098)	0.897	0.950 (0.871 - 1.036)	0.248
Current	0.910 (0.796 - 1.040)	0.166	0.853 (0.734 - 0.992)	0.038	0.658 (0.571 - 0.758)	< 0.001
Exercise	1.165 (1.080 - 1.255)	< 0.001	1.228 (1.130 - 1.335)	< 0.001	1.137 (1.045 - 1.237)	0.003
History of Heart Attack	0.879 (0.799 - 0.966)	0.008	1.043 (0.936 - 1.163)	0.443	0.892 (0.797 - 0.998)	0.046
Coronary Heart Disease	1.157 (1.052 - 1.274)	0.003	1.053 (0.944 - 1.173)	0.354	1.085 (0.972 - 1.211)	0.144
Stroke	0.920 (0.820 - 1.031)	0.151	1.006 (0.884 - 1.145)	0.926	1.062 (0.941 - 1.199)	0.330
Activity limitations	1.126 (1.045 - 1.214)	0.002	1.021 (0.939 - 1.112)	0.624	0.903 (0.831 - 0.982)	0.018
Insulin User	1.433 (1.311 - 1.568)	< 0.001	1.726 (1.551 - 1.919)	< 0.001	1.260 (1.137 - 1.395)	< 0.001
Diabetes Duration [< 5 y]						
5 - 9 y	1.523 (1.371 - 1.693)	< 0.001	1.355 (1.212 - 1.515)	< 0.001	1.187 (1.058 - 1.332)	0.004
>= 10 y	1.825 (1.664 - 2.000)	< 0.001	1.773 (1.611 - 1.952)	< 0.001	1.550 (1.401 - 1.715)	< 0.001
Has Health Insurance	1.467 (1.100 - 1.955)	0.009	1.057 (0.753 - 1.485)	0.748	1.329 (0.931 - 1.897)	0.118
Has Personal Doctor	1.912 (1.555 - 2.351)	< 0.001	1.435 (1.136 - 1.813)	0.002	1.158 (0.922 - 1.452)	0.207
Cost Barrier to Medical Care	0.809 (0.695 - 0.941)	0.006	0.754 (0.634 - 0.896)	0.001	0.652 (0.560 - 0.761)	< 0.001

Routine Checkup Last 12 Months	1.627 (1.447 - 1.829)	< 0.001	2.034 (1.791 - 2.309)	< 0.001	1.622 (1.431 - 1.838)	< 0.001
Urban residence	1.125 (1.039 - 1.218)	0.004	1.079 (0.987 - 1.180)	0.093	1.141 (1.043 - 1.248)	0.004
Physicians per 100,000 population in County	1.034 (0.945 - 1.132)	0.468	0.992 (0.970 - 1.014)	0.456	0.986 (0.964 - 1.009)	0.239
FQHCs in County [None]						
1	1.021 (0.917 - 1.136)	0.706	0.869 (0.769 - 0.982)	0.024	0.957 (0.847 - 1.081)	0.477
2 or more	1.012 (0.920 - 1.113)	0.808	1.004 (0.902 - 1.117)	0.941	0.997 (0.892 - 1.113)	0.951
Health Professions Shortage Area [None]						
Part County	0.863 (0.768 - 0.970)	0.014	0.998 (0.875 - 1.137)	0.970	0.938 (0.818 - 1.075)	0.355
Whole County	0.969 (0.865 - 1.086)	0.591	0.994 (0.875 - 1.129)	0.925	0.964 (0.845 - 1.101)	0.590