

Appendix
Medical Expenditures Associated With Hypertension in the U.S., 2000–2013
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Appendix Table 1. Characteristics of Study Population by Hypertension Status, Medical Expenditure Panel Survey 2000–2001 and 2012–2013^a

Characteristics	2000–2001			2012–2013		
	With hypertension (n=8,289)	Without hypertension (n=25,754)	p-value ^b	With hypertension (n=15,212)	Without hypertension (n=30,100)	p-value ^b
Percentage (%) with positive annual medical expenditures	96.9	79.7		93.4	71.1	
Among those with positive costs, total expenditures in 2015 \$ ^c	7,442.0	3,300.7	<0.001	8,966.1	4,381.9	<0.001
Age (%)			<0.001			<0.001
18–44 years	17.8	63.2		18.8	61.1	
45–64 years	42.6	27.4		42.4	30.7	
≥65 years	39.6	9.4		38.8	8.2	
Sex (%)			0.032			<0.001
Male	46.7	48.1		50.9	46.6	
Female	53.3	51.9		49.1	53.4	
Race/Ethnicity (%) ^d			<0.001			<0.001
NH white	77.6	73.8		69.2	65.4	
NH black	12.8	10.0		14.1	9.7	
Hispanic	6.8	11.8		10.8	16.6	
Other races	2.8	4.3		5.9	8.3	
U.S. region (%)			<0.001			<0.001
Northeast	18.4	18.7		17.0	18.0	
Midwest	23.7	23.6		21.9	21.7	
South	38.9	35.0		41.1	35.6	
West	19.1	22.8		20.1	24.7	
Education (%)			<0.001			<0.001
Less than high school	25.2	18.6		19.1	16.1	
High school	36.5	32.2		27.4	22.0	
Some college	19.1	23.0		29.3	30.3	
College and above	19.2	26.3		24.2	31.7	
Income level (%)			<0.001			<0.001

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Poor/near poor	16.2	12.7	17.9	16.6	
Low income	14.3	12.1	14.7	13.2	
Middle income	31.7	32.0	29.4	30.2	
High income	37.8	43.3	38.0	40.0	
Health insurance status (%)			<0.001		<0.001
Private	69.4	76.8	63.1	69.5	
Public	24.7	9.4	28.1	12.7	
Out of pocket	5.9	13.9	8.8	17.8	
Currently married (%)			<0.001		<0.001
Yes	58.9	56.4	55.7	51.2	
No	41.1	43.6	44.3	48.8	
Current smokers (%)			<0.001		0.704
Yes	19.7	24.4	17.6	17.4	
No	80.3	75.6	82.4	82.7	
Weight status (%) ^e			<0.001		<0.001
BMI <25	25.3	45.6	21.2	43.2	
BMI 25–30	37.7	35.2	34.7	33.2	
BMI ≥30	37.1	19.2	44.2	23.6	
Diabetes (%)			<0.001		<0.001
Yes	16.8	2.9	21.5	2.9	
No	83.2	97.1	78.5	97.1	
Emphysema (%)			<0.001		<0.001
Yes	3.4	0.8	4.1	1.0	
No	96.6	99.2	95.9	99.0	
Asthma (%)			<0.001		<0.001
Yes	11.6	8.5	11.5	8.9	
No	88.4	91.5	88.5	91.1	
Health status (%)			<0.001		<0.001
Excellent/ very good	30.9	62.7	36.2	65.8	
Good	39.5	28.0	38.7	26.0	
Fair / poor	29.6	9.3	25.1	8.2	

Note: Boldface indicates statistical significance ($p < 0.05$).

^aPopulation weights were adjusted for all statistics.

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^b*p*-values were calculated using Chi-square test for categorical variables, and ANOVA test for continuous variables.

^cMedical expenditures were adjusted to 2015 U.S. dollar value using the Gross Domestic Product Price Index recommended by AHRQ for analyzing expenditure trends.¹³

^dNH: Non-Hispanic; Other races included Asians, American Indians, and other defined races.

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Appendix Table 2. Prevalence (%) of Hypertension in U.S. Adults Aged >18 Years, Medical Expenditure Panel Survey 2000–2013^a

Characteristics	2000-2001 (n=34,043)	2002-2003 (n=42,416)	2004-2005 (n=39,182)	2006-2007 (n=37,343)	2008-2009 (n=40,927)	2010-2011 (n=40,518)	2012-2013 (n=45,312)	AAPC ^c	p- value for AAPC
Overall	23.5 (22.8–24.2)	25.2 (24.4–25.9)	26.9 (26.1–27.7)	28.5 (27.7–29.4)	32.8 (31.8–33.7)	33.5 (32.7–34.3)	34.5 (33.5–35.4)	7.1	<0.001
Age, years									
18–44	7.9 (7.5–8.5)	8.6 (8.1–9.2)	8.8 (8.3–9.4)	9.8 (9.2–10.5)	13.1 (12.3–13.9)	13.0 (12.3–13.8)	13.9 (13.1–14.8)	10.9	<0.001
45–64	32.3 (31.1–33.5)	33.7 (32.5–35.0)	35.7 (34.4–37.0)	37.2 (36.0–38.5)	42.2 (40.8–43.5)	42.4 (41.0–43.8)	42.1 (40.7–43.5)	5.2	<0.001
≥65	56.3 (54.7–57.9)	60.2 (58.4–62.0)	64.0 (62.2–65.7)	66.6 (64.8–68.3)	70.0 (68.2–71.7)	70.5 (68.6–72.2)	71.3 (69.7–72.9)	4.0	<0.001
Sex									
Male	22.9 (22.1–23.8)	24.9 (23.9–25.9)	26.8 (25.7–27.8)	28.5 (27.4–29.5)	33.4 (32.3–34.6)	34.8 (33.8–35.8)	36.5 (35.4–37.7)	8.6	<0.001
Female	24.0 (23.2–24.9)	25.4 (24.6–26.2)	27.0 (26.1–27.9)	28.6 (27.5–29.6)	32.2 (31.1–33.4)	32.2 (31.1–33.4)	32.6 (31.4–33.8)	5.8	<0.001
Race/Ethnicity									
Non-Hispanic white	24.4 (23.6–25.2)	26.2 (25.3–27.1)	28.1 (27.1–29.0)	29.5 (28.5–30.5)	33.7 (32.5–34.8)	34.8 (33.8–35.9)	35.8 (34.6–37.0)	7.0	<0.001
Non-Hispanic black	28.2 (26.5–29.9)	32.2 (30.3–34.1)	33.3 (31.4–35.1)	36.1 (34.3–38.1)	40.1 (38.3–41.9)	41.2 (39.8–42.6)	43.3 (41.9–44.8)	7.2	<0.001
Hispanic	15.0 (13.9–16.2)	14.9 (13.6–16.3)	17.1 (15.7–18.6)	19.8 (18.4–21.2)	24.5 (23.0–26.0)	23.6 (22.1–25.2)	25.6 (24.2–26.9)	10.6	<0.001
Other races ^b	16.8 (14.2–19.7)	20.3 (18.4–22.3)	22.0 (19.5–24.8)	22.8 (20.1–25.7)	28.3 (26.0–30.8)	28.0 (25.5–30.5)	27.2 (24.9–29.7)	8.5	0.004

Note: Boldface indicates statistical significance ($p < 0.05$).

^aPopulation weights were adjusted for all statistics.

^bOther races included Asians, American Indians, and other defined races.

^cAverage Annual percent change (AAPC) calculated by using Joinpoint regression analysis.

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Appendix Table 3. Annual Per-Person Medical Expenditures (2015 \$) Associated With Hypertension, Medical Expenditure Panel Survey 2000–2013^a

Variables	2000-2001 (n=34,043)	2002-2003 (n=42,416)	2004-2005 (n=39,182)	2006-2007 (n=37,343)	2008-2009 (n=40,927)	2010-2011 (n=40,518)	2012-2013 (n=45,312)
Overall	1,398.5 (1,088.3–1,723.6)	1,632.0 (1,140.7–2,179.7)	1,924.9 (1,614.1–2,218.4)	1,675.3 (1,315.9–1,903.8)	1,523.7 (1,228.6–1,875.8)	1,562.4 (1,128.0–2,048.0)	1,494.0 (1,048.6–1,854.1)