

## Supplementary Online Content

George MG, Tong X, Bowman BA. Prevalence of cardiovascular risk factors and strokes in younger adults. *JAMA Neurol*. Published online April 10, 2017.  
doi:10.1001/jamaneurol.2017.0020

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This supplementary material has been provided by the authors to give readers additional information about their work.

**eTable 1.** Definitions of Risk Factors (ICD-9-CM)

Risk Factor	ICD-9-CM Codes
Hypertension	401.1, 401.9
Lipid disorders	272.0, 272.1, 272.2, 272.3, 272.4
Diabetes	249, 250
Tobacco use	305.1
Obesity	278.00, 278.01
Other drug abuse	292, 304, 305.2, 305.3, 305.4, 305.5, 305.6, 305.7, 305.8, 305.9, 648.3
Atrial fibrillation	427.3
Arteriovenous malformation	747.81

**eTable 2.** Ischemic Stroke Hospitalization Rates/10,000 hospitalizations by Age and Sex, 1995-96 – 2011-12<sup>a</sup>

	1995-1996	1999-2000	2003-2004	2007-2008	2011-2012
Male 18-34	11.2	13.0	15.6	16.5	18
Female 18-34	3.8	4.0	4.4	4.5	5.8
Male 35-44	37.7	43.4	48.2	56	68.2
Female 35-44	24.8	27.2	27.5	31.6	35.8
Male 45-54	135.4	120.9	120.1	126.9	144.1
Female 45-54	96.4	94.8	86.2	91.1	102.1
Male 55-64	269.9	251.2	228.8	223.9	234.6
Female 55-64	217.6	200.6	173.4	166.3	169.5

<sup>a</sup> Data for eFigure

**eTable 3.** Discharge Destination for Acute Ischemic Stroke Admissions, National Inpatient Sample (NIS) 2003-2012

Discharge destination	2003-04 % (S.E)	2005-06 % (S.E)	2007-08 % (S.E)	2009-10 % (S.E)	2011-12 % (S.E)	p-value for trend
<b>Age 18-34 Years old</b>						
Home/home health care	69.9 (1.1)	70.6 (1.2)	69.3 (1.1)	71.0 (1.1)	68.1 (1.1)	0.34
Transfer to short term hospital	5.3 (0.5)	5.3 (0.5)	6.6 (0.7)	6.0 (0.6)	6.3 (0.6)	0.14
Transfer to other <sup>a</sup>	18.7 (1.0)	19.2 (1.1)	19.1 (1.0)	18.0 (0.9)	20.3 (1.0)	0.55
Died in hospital	3.7 (0.5)	2.8 (0.4)	2.5 (0.4)	3.0 (0.4)	2.6 (0.3)	0.12
<b>Age 35-44 Years old</b>						
Home/home health care	70.2 (0.7)	70.0 (0.7)	69.3 (0.7)	70.5 (0.8)	70.8 (0.6)	0.42
Transfer to short term hospital	4.3 (0.3)	4.1 (0.3)	4.7 (0.4)	4.8 (0.4)	4.6 (0.3)	0.21
Transfer to other <sup>a</sup>	20.3 (0.7)	20.7 (0.6)	21.0 (0.6)	20.2 (0.7)	20.0 (0.6)	0.58
Died in hospital	2.9 (0.2)	2.8 (0.2)	2.7 (0.2)	2.5 (0.2)	2.2 (0.2)	<b>0.01</b>
<b>Age 45-54 Years old</b>						
Home/home health care	70.5 (0.5)	70.2 (0.5)	70.3 (0.5)	69.5 (0.5)	69.3 (0.4)	<b>0.03</b>
Transfer to short term hospital	3.1 (0.2)	3.5 (0.2)	4.0 (0.2)	3.9 (0.2)	3.5 (0.2)	<b>0.04</b>
Transfer to other <sup>a</sup>	21.5 (0.4)	22.1 (0.4)	21.6 (0.4)	22.4 (0.5)	23.3 (0.4)	<b>0.004</b>
Died in hospital	3.0 (0.1)	2.5 (0.1)	2.4 (0.1)	2.3 (0.1)	2.2 (0.1)	<b>&lt;0.001</b>
<b>Age 55-64 Years old</b>						
Home/home health care	70.5 (0.4)	71.0 (0.4)	70.8 (0.4)	69.2 (0.4)	68.0 (0.3)	<b>&lt;0.001</b>
Transfer to short term hospital	2.7 (0.1)	2.8 (0.1)	3.3 (0.2)	3.3 (0.2)	3.1 (0.1)	<b>&lt;0.001</b>
Transfer to other <sup>a</sup>	22.8 (0.4)	22.7 (0.4)	22.6 (0.4)	24.0 (0.4)	25.6 (0.3)	<b>&lt;0.001</b>
Died in hospital	2.8 (0.1)	2.7 (0.1)	2.3 (0.1)	2.4 (0.1)	2.2 (0.1)	<b>&lt;0.001</b>

<sup>a</sup> Includes skilled nursing facility, intermediate care facility, long-term care facility, or rehabilitation facility

**eTable 4.** Discharge Destination for Intracerebral Hemorrhage Admissions, National Inpatient Sample (NIS) 2003-2012

<b>Discharge destination</b>	2003-04 % (S.E)	2005-06 % (S.E)	2007-08 % (S.E)	2009-10 % (S.E)	2011-12 % (S.E)	p-value for trend
<b>Age 18-34 Years old</b>						
Home/home health care	46.5 (2.3)	50.3 (2.4)	53.9 (2.3)	54.6 (2.1)	50.7 (2.1)	0.08
Transfer to short term hospital	8.2 (1.3)	7.2 (1.1)	8.6 (1.3)	7.7 (1.3)	6.2 (1.1)	0.28
Transfer to other <sup>a</sup>	20.6 (2.0)	23.2 (2.3)	20.2 (1.8)	21.0 (1.9)	25.4 (2.0)	0.18
Died in hospital	22.3 (1.8)	18.1 (1.6)	16.2 (1.6)	16.2 (1.6)	16.7 (1.5)	<b>0.009</b>
<b>Age 35-44 Years old</b>						
Home/home health care	40.2 (1.4)	40.5 (1.5)	41.9 (1.6)	40.2 (1.5)	39.9 (1.5)	0.84
Transfer to short term hospital	6.7 (0.8)	6.3 (0.8)	7.0 (0.9)	6.4 (0.9)	6.1 (0.8)	0.64
Transfer to other <sup>a</sup>	27.1 (1.3)	29.0 (1.3)	29.9 (1.5)	32.2 (1.7)	33.6 (1.4)	<b>0.002</b>
Died in hospital	24.0 (1.3)	23.0 (1.3)	20.0 (1.1)	19.4 (1.1)	19.4 (1.2)	<b>0.002</b>
<b>Age 45-54 Years old</b>						
Home/home health care	34.1 (1.0)	35.5 (1.2)	37.9 (1.0)	35.5 (1.1)	35.3 (0.9)	0.44
Transfer to short term hospital	5.4 (0.5)	4.6 (0.4)	5.0 (0.7)	5.5 (0.5)	4.7 (0.5)	0.70
Transfer to other <sup>a</sup>	29.4 (0.9)	32.3 (1.0)	34.2 (1.0)	36.0 (1.2)	37.2 (0.9)	<b>&lt;0.001</b>
Died in hospital	29.1 (0.8)	26.6 (0.8)	22.1 (0.8)	22.3 (0.7)	21.6 (0.7)	<b>&lt;0.001</b>
<b>Age 55-64 Years old</b>						
Home/home health care	31.6 (0.8)	32.2 (0.8)	33.3 (0.9)	32.8 (1.0)	32.2 (0.7)	0.46
Transfer to short term hospital	4.9 (0.4)	5.1 (0.4)	6.0 (0.7)	4.5 (0.4)	4.5 (0.4)	0.26
Transfer to other <sup>a</sup>	34.3 (0.9)	36.3 (0.9)	36.4 (1.0)	38.4 (1.1)	39.8 (0.9)	<b>&lt;0.001</b>
Died in hospital	27.8 (0.7)	25.8 (0.8)	23.8 (0.7)	23.4 (0.7)	22.9 (0.6)	<b>&lt;0.001</b>

<sup>a</sup> Includes skilled nursing facility, intermediate care facility, long-term care facility, or rehabilitation facility

**eTable 5.** Discharge Destination for Subarachnoid Hemorrhage Admissions, National Inpatient Sample (NIS) 2003-2012

Discharge destination	2003-04 % (S.E)	2005-06 % (S.E)	2007-08 % (S.E)	2009-10 % (S.E)	2011-12 % (S.E)	p-value for trend
<b>Age 18-34 Years old</b>						
Home/home health care	61.7 (2.0)	55.9 (2.1)	61.7 (2.1)	58.0 (2.0)	64.3 (2.0)	0.27
Transfer to short term hospital	10.2 (1.4)	12.7 (1.5)	10.7 (1.5)	8.4 (1.2)	6.4 (1.1)	<b>0.007</b>
Transfer to other <sup>a</sup>	13.3 (1.2)	14.5 (1.5)	16.4 (1.5)	18.5 (1.7)	16.5 (1.4)	<b>0.03</b>
Died in hospital	13.6 (1.3)	15.9 (1.4)	10.2 (1.1)	12.8 (1.3)	11.2 (1.3)	0.09
<b>Age 35-44 Years old</b>						
Home/home health care	54.0 (1.6)	54.2 (1.7)	59.2 (1.6)	58.0 (1.7)	59.3 (1.5)	<b>0.004</b>
Transfer to short term hospital	10.2 (1.1)	11.9 (1.3)	8.8 (1.1)	8.3 (1.1)	8.5 (1.1)	0.08
Transfer to other <sup>a</sup>	18.5 (1.3)	18.0 (1.1)	16.9 (1.1)	18.0 (1.3)	17.4 (1.2)	0.53
Died in hospital	16.2 (0.9)	14.9 (1.0)	14.4 (1.1)	14.7 (1.1)	13.7 (0.9)	0.06
<b>Age 45-54 Years old</b>						
Home/home health care	47.6 (1.4)	48.5 (1.3)	52.6 (1.3)	51.4 (1.5)	53.3 (1.3)	<b>&lt;0.001</b>
Transfer to short term hospital	10.7 (1.0)	11.6 (1.1)	11.9 (1.1)	9.5 (0.9)	7.3 (0.7)	<b>0.001</b>
Transfer to other <sup>a</sup>	20.5 (1.0)	20.9 (1.0)	18.1 (1.0)	21.6 (1.2)	22.9 (1.0)	0.08
Died in hospital	20.4 (0.9)	18.4 (0.8)	16.7 (0.9)	16.7 (0.8)	15.9 (0.8)	<b>&lt;0.001</b>
<b>Age 55-64 Years old</b>						
Home/home health care	39.7 (1.4)	40.4 (1.3)	42.4 (1.4)	44.5 (1.5)	45.1 (1.1)	<b>&lt;0.001</b>
Transfer to short term hospital	10.9 (1.0)	10.6 (0.9)	11.9 (1.3)	9.0 (0.9)	7.3 (0.7)	<b>0.002</b>
Transfer to other <sup>a</sup>	26.8 (1.3)	26.6 (1.2)	25.9 (1.3)	26.2 (1.2)	29.7 (1.0)	0.17
Died in hospital	21.4 (1.0)	22.0 (0.9)	19.4 (1.0)	20.0 (0.9)	17.7 (0.9)	<b>0.001</b>

<sup>a</sup> Includes skilled nursing facility, intermediate care facility, long-term care facility, or rehabilitation facility

**eFigure.** Acute Ischemic Stroke hospitalization Rates/10,000 Hospitalizations by Age and Sex, 1995-1996—2011-2012

