

**CHAPTER 2**  
**Benign Prostatic Hyperplasia**  
**Lower Urinary Tract Symptoms**  
**Bladder Stones**

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**Table 2-1. Codes used in the diagnosis and management of benign prostatic hyperplasia****Benign Prostatic Hyperplasia****Males 40 years or older with any of the following ICD-9 diagnosis codes:**

594.1	Other calculus in bladder
599.6	Urinary obstruction
599.60	Urinary obstruction, unspecified
599.69	Urinary obstruction, not elsewhere classified
600	Hyperplasia of prostate
600.0	Hypertrophy (benign) of prostate
600.01	Hypertrophy (benign) of prostate with urinary obstruction and other lower urinary tract symptoms (LUTS)
600.9	Hyperplasia of prostate, unspecified
600.90	Hyperplasia of prostate, unspecified, without urinary obstruction and other lower urinary tract symptoms (LUTS)
600.91	Hyperplasia of prostate, unspecified, with urinary obstruction and other lower urinary tract symptoms (LUTS)

**Males 40 years or older one of the following ICD-9 diagnosis codes, but not carrying diagnosis code 185 (malignant neoplasm of prostate) as another diagnosis:**

788.2	Retention of urine
788.20	Retention of urine, unspecified
788.21	Incomplete bladder emptying
788.29	Other specified retention of urine
788.4	Frequency of urination and polyuria
788.41	Urinary frequency
788.42	Polyuria
788.43	Nocturia
788.61	Splitting of urinary stream
788.62	Slowing of urinary stream

**Males 40 years or older with any of the following ICD-9 diagnosis codes and any of the following procedure or BPH medication codes:***ICD-9 diagnosis codes*

600.1	Nodular prostate
600.2	Benign localized hyperplasia of prostate
600.20	Benign localized hyperplasia of prostate without urinary obstruction and other lower urinary tract symptoms (LUTS)
600.21	Benign localized hyperplasia of prostate with urinary obstruction and other lower urinary tract symptoms (LUTS)

*ICD-9 procedure codes*

60.2	Transurethral prostatectomy
60.21	Transurethral (ultrasound) guided laser induced prostatectomy (TULIP)
60.29	Other transurethral prostatectomy
60.3	Suprapubic prostatectomy
60.4	Retropubic prostatectomy
60.94	Control of (postoperative) hemorrhage of prostate
60.95	Transurethral balloon dilation of the prostatic urethra
60.96	Transurethral destruction of prostate tissue by microwave thermotherapy
60.97	Other transurethral destruction of prostate tissue by other thermotherapy

*CPT procedure codes*

52450	Transurethral incision of prostate
52510	Transurethral balloon dilation of the prostatic urethra
52601	Transurethral electrosurgical resection of prostate, including control of postoperative bleeding, complete (vasectomy, meatotomy, cystourethroscopy, urethral calibration and/or dilation, and internal urethrotomy are included)

Continued on next page.

**Table 2-1 (continued). Codes used in the diagnosis and management of benign prostatic hyperplasia**

52606	Transurethral fulguration for postoperative bleeding occurring after the usual follow-up time
52612	Transurethral resection of prostate; first stage of two-stage resection (partial resection)
52614	Transurethral resection of prostate; second stage of two-stage resection (resection completed)
52620	Transurethral resection of residual obstructive tissue after 90 days postoperative
52630	Transurethral resection; residual or regrowth of obstructive prostate tissue including control of postoperative bleeding, complete (vasectomy, meatotomy, cystourethroscopy, urethral calibration and/or dilation, and internal urethrotomy are included)
52640	Transurethral resection; of postoperative bladder neck contracture
52647	Laser coagulation of prostate, including control of postoperative bleeding, complete (vasectomy, meatotomy, cystourethroscopy, urethral calibration and/or dilation, and internal urethrotomy are included if performed)
52648	Laser vaporization of prostate, including control of postoperative bleeding, complete (vasectomy, meatotomy, cystourethroscopy, urethral calibration and/or dilation, internal urethrotomy and transurethral resection of prostate are included if performed)
53850	Transurethral destruction of prostate tissue by microwave thermotherapy
53852	Transurethral destruction of prostate tissue by radiofrequency thermotherapy
55801	Prostatectomy, perineal, subtotal (including control of postoperative bleeding, vasectomy, meatotomy, urethral calibration and/or dilation, and internal urethrotomy)
55821	Prostatectomy (including control of postoperative bleeding, vasectomy, meatotomy, urethral calibration and/or dilation, and internal urethrotomy); suprapubic, subtotal, 1 or 2 stages
55831	Prostatectomy (including control of postoperative bleeding, vasectomy, meatotomy, urethral calibration and/or dilation, and internal urethrotomy); retropubic, subtotal

**Table 2-2. Nationally representative inpatient stays for benign prostatic hyperplasia listed as primary diagnosis, rate,<sup>a</sup> age-adjusted rate<sup>b</sup>**

	2002 (N=105,462)		2003 (N=88,295)		2004 (N=68,975)		2005 (N=69,053)		2006 (N=67,504)		2007 (N=63,249)	
	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate
Total	103.5	174.2	85.2	142.1	66.5	116.4	65.8	113.3	63.5	109.4	58.6	100.7
Age												
40-44	3.5*		3.2*		3.6*		3.1*		3.9*		3.0*	
45-54	20.1*		17.3*		13.4*		11.6*		11.9*		12.0*	
55-64	143.5*		112.3*		82.9*		77.9*		74.8*		67.5*	
▶ 65-74	457.3		377.5		284.6		274.7		259.7		240.4	
75-84	601.6*		481.9*		454.3*		450.2*		443.9*		400.3*	
85+	803.1*		698.0*		588.5*		610.4*		575.0*		556.3*	
Race/ethnicity												
▶ White	74.5	128.0	68.1	105.5	56.0	90.9	57.6	91.4	53.2	84.7	48.9	77.3
Black	49.4*	92.8	41.6*	76.2	37.3*	71.0	29.3*	55.4	32.3*	60.9	31.5*	59.2
Hispanic	†	†	47.2*	113.0	24.8*	64.2	26.0*	65.1	28.2*	68.9	22.1*	53.5
Asian	38.4*	107.4	40.1*	75.4	25.0*	61.6	20.9*	53.4	19.5*	38.9	23.7*	60.5
Other	184.8*	488.3	90.2*	185.1	72.2*	152.7	68.3*	139.0	74.0*	139.5	71.7*	129.3
Region												
Northeast	126.5	196.7	94.3	144.4	76.2	125.4	72.3	120.2	73.4	120.5	67.6	109.9
South	99.3	167.4	84.4	140.5	63.1	108.6	62.2	107.2	59.7	103.1	51.1	87.0
▶ Midwest	109.5	185.7	90.2	158.0	70.1	127.4	73.1	124.1	71.5	122.6	67.7	115.9
West	84.1*	152.5	73.8*	127.9	60.3*	110.6	59.0*	105.9	53.7*	96.8	54.6*	99.7

▶ Denotes reference group.

\*Statistically different from reference group ( $p < .05$ ).

† Figure does not meet standard for reliability or precision.

<sup>a</sup>Rate per 100,000 individuals in the same demographic stratum is based on 2002-2007 population estimates from Current Population Survey (CPS).<sup>b</sup>Rate per 100,000 age-adjusted to the 2005 US standard population (US Population Estimates from Current Population Survey).

SOURCE: Healthcare Cost and Utilization Project Nationwide Inpatient Sample, 2002-2007.

**Table 2-3. Inpatient stays by Medicare beneficiaries for benign prostatic hyperplasia listed as primary diagnosis, rate,<sup>a</sup> age-adjusted rate<sup>b</sup>**

	2002 (N=65,360)		2003 (N=57,080)		2004 (N=44,400)		2005 (N=43,200)		2006 (N=40,260)		2007 (N=37,380)	
	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate
Total	418.5	535.8	355.1	459.3	271.0	345.5	261.9	333.2	247.9	317.2	230.1	298.3
Under 65/65+												
< 65 Years	72.8*	72.8	55.9*	55.9	58.4*	58.4	55.3*	55.3	54.3*	54.3	44.7*	44.7
▶ 65+ Years	532.5	535.8	455.6	459.3	343.8	345.5	334.9	333.2	316.9	317.2	298.5	298.3
Age												
▶ 65-69	317.3		260.3		180.6		172.0		153.0		159.7	
70-74	496.6*		411.5*		312.7*		315.3*		280.3*		244.8*	
75-79	631.2*		570.7*		404.0*		410.0*		406.1*		355.4*	
80-84	758.8*		648.8*		544.2*		516.4*		448.4*		477.8*	
85-89	851.5*		741.9*		574.1*		485.1*		593.8*		523.6*	
90-94	754.1*		667.3*		642.2*		657.6*		593.3*		491.9*	
95-97	1,131*♦		726.9*♦		252.7*♦		332.4*♦		813.0*♦		746.3*♦	
98+	265.3*♦		218.0*♦		128.7*♦		379.3*♦		123.5*♦		363.6*♦	
Race/ethnicity												
▶ White	434.9	547.6	368.3	467.1	282.3	352.3	274.2	340.7	256.5	321.5	241.7	308.9
Black	289.2*	443.4	267.2*	420.7	203.2*	323.2	172.4*	276.0	182.9*	301.2	160.1*	258.8
Hispanic	420.0*	573.8	316.8*	419.9	246.8*	337.6	245.3*	302.0	221.5*	315.2	164.3*♦	181.3
Asian	178.7*♦	165.0	291.1*	285.5	125.1*♦	116.9	141.3*♦	156.5	217.1*♦	219.3	132.4*♦	121.2
Other	450.0*	641.0	286.2*	480.0	247.7*	388.2	255.9*	376.6	225.9*	299.9	220.1*	297.7
Unknown	1,141*♦	...	560.9*♦	...	365.2*♦	...	701.5*♦	...	580.0*♦	...	350.6*♦	...
Region												
▶ Northeast	436.7	554.1	376.1	480.3	241.2	307.8	273.3	339.7	251.2	319.6	222.8	279.5
South	401.0*	512.9	337.7*	442.0	267.2*	343.2	245.7*	311.6	239.3*	309.6	206.3*	265.4
Midwest	464.7*	587.3	375.0*	477.0	296.0*	368.8	291.4*	366.2	256.1*	320.3	270.5*	344.1
West	369.6*	487.1	342.2*	444.2	276.6*	358.4	244.5*	326.1	251.6*	325.5	234.4*	324.1

... Data unavailable.

▶ Denotes reference group.

\*Statistically different from reference group (p&lt;.05).

♦Rate based on a count less than 600, should be interpreted with caution.

<sup>a</sup>Rate per 100,000 based on enrollment in calendar years for individuals in the same demographic stratum.<sup>b</sup>Rate per 100,000 age-adjusted to the 2005 US standard population (US Population Estimates from Current Population Survey).

SOURCE: Centers for Medicare and Medicaid Services, 5% Standard Analytical Claims Files.

**Table 2-4. Inpatient stays by privately insured individuals for benign prostatic hyperplasia listed as primary diagnosis, rate,<sup>a</sup> age-adjusted rate<sup>b</sup>**

	2002 (N=4,260)		2003 (N=4,175)		2004 (N=3,701)		2005 (N=4,240)		2006 (N=3,065)	
	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate
Total	99.4	300.6	87.2	296.8	75.6	254.7	81.6	244.4	60.2	229.4
Age										
40-44	18.6*		13.1*		12.3*		15.3*		10.8*	
45-54	51.9*		40.1*		34.8*		34.4*		37.2*	
55-64	243.6*		199.0		153.3*		151.0*		149.1*	
▶ 65-74	669.0		603.0		507.7		498.9		424.0	
75-84	1,401*		1,326*		1,186*		1,092*		1,059*	
85+	...		1,610*		1,421*		1,389*		1,326*	
Race/ethnicity										
▶ White	106.1	291.4	99.2	315.6	82.5	282.8	88.7	271.1	67.8	253.0
Black	164.4*	372.0	128.1*	271.3	101.4*	239.5	107.0*	216.3	53.2*	159.2
Hispanic	77.5*	248.4	53.3*	180.0	41.0*	147.0	39.1*	139.0	32.9*	140.8
Asian	42.2*♦	262.4	48.5*	236.7	35.1*	145.6	39.9*	194.3	27.8*	163.6
Other	79.7*♦	411.8	61.8*♦	308.7	52.5*♦	249.1	31.4*♦	146.6	51.2*♦	198.6
Unknown	124.1*	...	96.1*	...	66.5*	...	85.9*	...	65.1*	...
Missing	93.7*	...	75.8*	...	71.5*	...	76.3*	...	47.4*	...
Region										
Northeast	127.4*	331.0	114.9*	351.1	87.8	262.3	86.0*	249.9	72.1*	262.7
South	90.0*	274.8	79.2*	269.4	69.1*	241.9	69.3*	220.0	53.6*	215.1
▶ Midwest	117.1	334.1	101.5	322.4	91.5	279.0	106.2	286.5	63.0	252.8
West	61.7*	245.1	54.2*	249.1	49.9*	215.5	64.4*	203.4	65.7*	208.1

... Data unavailable.

▶ Denotes reference group.

\*Statistically different from reference group (p&lt;.05).

♦Rate based on a count less than 30, should be interpreted with caution.

<sup>a</sup>Rate per 100,000 based on enrollment in calendar years for individuals in the same demographic stratum.<sup>b</sup>Rate per 100,000 age-adjusted to the 2005 US standard population (US Population Estimates from Current Population Survey).

SOURCE: I3 Claims Database, 2002-2006.

**Table 2-5. Hospital outpatient visits by Medicare beneficiaries for benign prostatic hyperplasia listed as primary diagnosis, rate,<sup>a</sup> age-adjusted rate<sup>b</sup>**

	2002 (N=91,640)		2003 (N=81,700)		2004 (N=48,040)		2005 (N=54,880)		2006 (N=63,780)		2007 (N=67,880)	
	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate
Total	586.8	702.6	508.2	606.9	293.3	352.4	332.8	394.2	392.7	466.2	417.8	512.5
Under 65/65+												
< 65 Years	248.4*	248.4	217.7*	217.7	127.9*	127.9	145.0*	145.0	180.3*	180.3	164.3*	164.3
▶ 65+ Years	698.4	702.6	605.9	606.9	349.8	352.4	399.1	394.2	468.4	466.2	511.3	512.5
Age												
▶ 65-69	524.5		446.9		231.3		242.3		303.4		318.3	
70-74	698.3*		563.4*		281.4*		374.7*		382.4*		473.8*	
75-79	726.8*		683.9*		407.2*		456.0*		564.8*		603.9*	
80-84	837.2*		720.5*		452.5*		506.9*		603.1*		668.1*	
85-89	1,097*		947.2*		703.7*		674.5*		838.7*		859.3*	
90-94	942.7*		992.8*		657.8*		907.1*		953.8*		873.7*	
95-97	862.1**♦		726.9**♦		404.2**♦		902.2**♦		765.2**♦		653.0**♦	
98+	442.1**♦		348.7**♦		257.4**♦		210.7**♦		370.5**♦		161.6**♦	
Race/ethnicity												
▶ White	540.8	647.6	462.4	544.0	282.5	335.5	316.6	369.5	386.6	457.0	415.5	504.6
Black	697.8*	949.1	680.9*	979.0	311.1*	416.8	347.3*	468.9	332.7*	409.7	379.0*	517.6
Hispanic	988.6*	1,202	739.1*	952.6	349.2*	433.1	391.4*	534.2	478.9*	512.4	404.9*	514.5
Asian	592.5*	598.1	546.9*	658.3	300.2*	277.2	415.9*	456.5	620.2*	653.9	375.2*	431.5
Other	1,614*	2,185	1,372*	2,090	613.2*	914.1	767.7*	1,133	576.0*	806.7	649.7*	936.7
Unknown	1,749**♦	...	801.3**♦	...	219.1**♦	...	779.4**♦	...	1,408**♦	...	1,315**♦	...
Region												
▶ Northeast	695.2	817.2	558.9	630.4	345.9	391.8	348.3	388.6	522.9	612.6	609.4	751.6
South	393.4*	459.6	332.9*	394.6	162.1*	192.5	196.0*	229.6	206.0*	241.5	206.0*	235.0
Midwest	723.9*	866.2	661.5*	797.2	434.9*	518.8	500.5*	599.0	540.3*	639.1	559.9*	696.0
West	703.7*	867.1	626.0*	771.8	328.3*	418.8	381.8*	460.2	458.5*	542.0	482.9*	599.0

... Data unavailable.

▶ Denotes reference group.

\*Statistically different from reference group ( $p < .05$ ).

♦Rate based on a count less than 600, should be interpreted with caution.

<sup>a</sup>Rate per 100,000 based on enrollment in calendar years for individuals in the same demographic stratum.<sup>b</sup>Rate per 100,000 age-adjusted to the 2005 US standard population (US Population Estimates from Current Population Survey).

SOURCE: Centers for Medicare and Medicaid Services, 5% Standard Analytical Claims Files.

**Table 2-6. Hospital outpatient visits by privately insured individuals for benign prostatic hyperplasia listed as primary diagnosis, rate,<sup>a</sup> age-adjusted rate<sup>b</sup>**

	2002 (N=10,819)		2003 (N=10,343)		2004 (N=7,618)		2005 (N=10,469)		2006 (N=9,725)	
	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate
Total	252.6	634.1	215.9	579.3	155.7	421.1	201.5	505.7	190.9	574.8
Age										
40-44	98.5*		90.3*		68.1*		80.1*		83.9*	
45-54	255.1*		217.3*		142.1*		169.5*		174.9*	
55-64	866.0*		657.2*		428.5*		535.8*		554.7*	
▶ 65-74	1,270		1,171		834.7		952.3		1,099	
75-84	1,586*		1,601*		1,207*		1,614*		1,759*	
85+	...		1,591*		1,861*		1,668*		3,059*	
Race/ethnicity										
▶ White	310.3	705.8	257.3	642.2	170.5	459.6	225.1	574.9	206.1	576.6
Black	327.7*	575.2	273.0*	526.7	153.7*	322.8	183.7*	353.6	174.8*	479.5
Hispanic	198.3*	562.8	180.8*	586.3	90.9*	293.8	99.5*	289.8	102.6*	399.8
Asian	176.2*	546.8	104.0*	347.5	57.2*	191.5	105.9*	366.4	92.4*	369.0
Other	281.1*	746.7	273.0*	781.7	125.5*	354.5	192.3*	506.9	200.6*	502.1
Unknown	334.1*	...	265.1*	...	161.5*	...	200.5*	...	202.7*	...
Missing	206.6*	...	165.1*	...	146.1*	...	174.7*	...	197.1*	...
Region										
Northeast	365.6*	855.4	307.8*	778.2	202.9*	491.0	233.5*	541.9	264.8*	675.8
South	198.9*	510.8	168.6*	463.6	127.0*	354.2	160.0*	403.9	149.3*	484.7
▶ Midwest	290.8	696.9	259.5	653.7	187.6	476.5	253.6	609.9	224.3	726.6
West	236.5*	706.9	188.6*	610.4	137.1*	461.1	195.3*	511.3	197.5*	528.6
Missing	...	...	...	...	...	...	...	...	...	...

... Data unavailable.

▶ Denotes reference group.

\*Statistically different from reference group (p&lt;.05).

<sup>a</sup>Rate per 100,000 based on enrollment in calendar years for individuals in the same demographic stratum.<sup>b</sup>Rate per 100,000 age-adjusted to the 2005 US standard population (US Population Estimates from Current Population Survey).

SOURCE: i3 Claims Database, 2002-2006.



**Table 2-7. Nationally representative hospital outpatient visits for benign prostatic hyperplasia listed as primary diagnosis, 2002-2007 (merged), 6-year count**

	<b>6-Year Count</b>
Total	553,614
Age	
40-44	21,660
45-54	102,895
55-64	159,106
65-74	143,215
75-84	71,105
85+	55,633
Race/ethnicity	
White	392,626
Black	148,561
Hispanic	9,426
Other	3,001
Region	
Northeast	106,272
South	236,747
Midwest	141,633
West	68,962

SOURCE: National Ambulatory Medical Care Survey, 2002-2007; National Hospital Ambulatory Medical Care Survey, 2002-2007.

**Table 2-8. Ambulatory surgery center visits by Medicare beneficiaries for benign prostatic hyperplasia listed as primary diagnosis, rate,<sup>a</sup> age-adjusted rate<sup>b</sup>**

	2002 (N=34,580)		2003 (N=33,440)		2004 (N=29,140)		2005 (N=35,880)		2006 (N=37,900)		2007 (N=38,840)	
	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate
Total	329.4	411.9	310.3	389.0	264.7	334.4	319.4	400.8	333.4	426.8	336.9	431.5
Age												
▶ 65-69	302.3		260.8		207.0		270.5		277.3		305.8	
70-74	389.2*		340.7*		329.0*		368.7*		410.3*		429.0*	
75-79	468.5*		489.6*		392.7*		493.8*		527.6*		510.9*	
80-84	557.3*		537.6*		456.1*		508.1*		522.1*		529.4*	
85-89	499.4*		502.5*		475.0*		565.9*		621.0*		545.1*	
90-94	454.2*		496.4*		430.7*		551.8*		540.7*		528.6*	
95-97	431.0*♦		363.4*♦		151.6*♦		427.4*♦		382.6*♦		279.9*♦	
98+	...		43.6*♦		85.8*♦		84.3*♦		123.5*♦		40.4*♦	
Race/ethnicity												
▶ White	340.9	418.5	325.9	402.2	279.1	345.3	335.1	411.6	352.6	441.4	355.5	444.1
Black	274.6*	414.8	232.5*	346.0	199.4*	312.2	247.4*	379.4	226.0*	376.4	272.7*	443.3
Hispanic	206.8*	312.6	217.4*	272.2	108.4*♦	121.4	186.9*	283.6	167.6*♦	228.7	158.4*♦	264.7
Asian	131.7*♦	135.9	61.7*♦	61.3	83.4*♦	144.5	196.2*♦	233.9	193.8*♦	242.7	139.8*♦	149.8
Other	307.2*♦	434.9	279.7*	401.3	253.9*	381.4	221.0*	324.0	288.0*	360.6	220.1*	311.6
Unknown	912.5*♦	...	480.8*♦	...	365.2*♦	...	623.5*♦	...	911.4*♦	...	525.9*♦	...
Region												
▶ Northeast	300.4	371.8	314.7	398.5	245.0	306.4	281.1	345.2	309.1	389.2	293.2	377.4
South	380.2*	488.4	343.5*	435.2	286.3*	364.1	336.2*	429.6	337.0*	440.6	353.2*	458.7
Midwest	347.1*	413.0	323.5*	392.9	295.0*	367.6	367.6*	443.4	399.5*	498.1	407.1*	504.0
West	219.7*	281.1	211.5*	268.0	194.9*	248.4	256.8*	338.3	260.5*	337.8	254.5*	329.4

... Data unavailable.

▶ Denotes reference group.

\*Statistically different from reference group ( $p < .05$ ).

♦Rate based on a count less than 600, should be interpreted with caution.

<sup>a</sup>Rate per 100,000 based on enrollment in calendar years for individuals in the same demographic stratum.<sup>b</sup>Rate per 100,000 age-adjusted to the 2005 US standard population (US Population Estimates from Current Population Survey).

SOURCE: Centers for Medicare and Medicaid Services, 5% Standard Analytical Claims Files.

**Table 2-9. Ambulatory surgery center visits by privately insured individuals for benign prostatic hyperplasia listed as primary diagnosis, rate,<sup>a</sup> age-adjusted rate<sup>b</sup>**

	2002 (N=693)		2003 (N=690)		2004 (N=539)		2005 (N=805)		2006 (N=875)	
	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate
Total	16.2	40.6	14.4	37.7	11.0	29.1	15.5	38.5	17.2	50.8
Age										
40-44	7.1*		7.4*		5.2*		4.1* <sup>♦</sup>		7.8*	
45-54	16.2*		14.2*		9.4*		12.8*		13.8*	
55-64	53.7*		46.6*		34.0*		44.2*		53.5*	
▶ 65-74	92.8		71.0		54.9		80.3		114.0	
75-84	87.3*		106.7*		98.2*		115.3*		152.6*	
85+	...		68.6* <sup>♦</sup>		38.9* <sup>♦</sup>		88.7* <sup>♦</sup>		144.4* <sup>♦</sup>	
Race/ethnicity										
▶ White	18.7	42.5	17.3	43.5	12.3	32.2	16.8	42.2	19.9	57.5
Black	12.9* <sup>♦</sup>	66.4	27.2*	50.5	16.4*	34.4	14.1* <sup>♦</sup>	27.0	16.1*	55.2
Hispanic	11.2* <sup>♦</sup>	28.7	10.0* <sup>♦</sup>	26.6	6.1* <sup>♦</sup>	17.8	7.9*	25.2	10.2*	29.8
Asian	4.4* <sup>♦</sup>	9.8	7.1* <sup>♦</sup>	39.2	2.9* <sup>♦</sup>	23.7	4.6* <sup>♦</sup>	45.1	4.4* <sup>♦</sup>	13.3
Other	14.1* <sup>♦</sup>	†	3.3* <sup>♦</sup>	15.8	...	...	6.3* <sup>♦</sup>	26.8	14.3* <sup>♦</sup>	49.7
Unknown	17.9* <sup>♦</sup>	...	17.0*	...	11.3*	...	16.5*	...	19.1*	...
Missing	15.1*	...	10.9*	...	8.9*	...	16.8*	...	10.2*	...
Region										
Northeast	16.0	37.2	18.6*	47.5	11.2	29.7	11.5*	27.2	15.0	44.6
South	19.3*	49.1	18.1*	46.6	12.6	36.2	16.4*	43.0	20.4*	64.9
▶ Midwest	15.3	36.7	11.0	27.0	11.3	26.0	18.9	43.4	16.1	41.9
West	8.0*	27.1	6.9*	28.3	4.9*	16.1	8.6*	24.0	11.5*	35.9

... Data unavailable.

▶ Denotes reference group.

\*Statistically different from reference group (p&lt;.05).

† Figure does not meet standard for reliability or precision.

\*Rate based on a count less than 30, should be interpreted with caution.

<sup>a</sup>Rate per 100,000 based on enrollment in calendar years for individuals in the same demographic stratum.<sup>b</sup>Rate per 100,000 age-adjusted to the 2005 US standard population (US Population Estimates from Current Population Survey).

SOURCE: i3 Claims Database, 2002-2006.

**Table 2-10. Nationally representative ambulatory surgery center visits for benign prostatic hyperplasia listed as primary diagnosis, count, rate<sup>a</sup>**

	Count	Rate
Total	88,942	83.6
Age		
40-44	558	5.0*
45-54	3,206	15.3*
55-64	15,470	104.0*
▶ 65-74	33,184	389.2
75-84	30,209	566.8*
85+	6,315	475.1*

▶ Denotes reference group.

\*Statistically different from reference group (p&lt;.05).

<sup>a</sup>Rate per 100,000 individuals in the same demographic stratum is based on 2006 population estimates from Current Population Survey (CPS).

SOURCE: National Survey of Ambulatory Surgery, 2006.

**Table 2-11. Physician office visits by Medicare beneficiaries for benign prostatic hyperplasia listed as any diagnosis, rate<sup>a</sup>, age-adjusted rate<sup>b</sup>**

	2002 (N=4,174,580)		2003 (N=4,091,000)		2004 (N=2,685,340)		2005 (N=2,805,040)		2006 (N=3,053,200)		2007 (N=3,121,180)	
	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate
Total	26,731	34,059	25,449	32,547	16,393	20,943	17,008	21,858	18,797	24,145	19,209	24,873
Under 65/65+												
< 65 Years	5,342*	5,342	5,167*	5,167	3,567*	3,567	3,796*	3,796	4,241*	4,241	4,334*	4,334
▶ 65+ Years	33,784	34,059	32,265	32,547	20,781	20,943	21,673	21,858	23,990	24,145	24,701	24,873
Age												
▶ 65-69	23,524		21,989		13,329		13,678		15,236		15,519	
70-74	33,235*		31,332*		19,357*		20,258*		22,402*		23,144*	
75-79	40,676*		38,716*		25,067*		26,552*		29,396*		30,163*	
80-84	43,688*		42,660*		28,911*		29,594*		32,721*		34,082*	
85-89	42,987*		42,999*		30,177*		32,234*		34,835*		36,027*	
90-94	38,855*		38,558*		29,219*		31,257*		34,938*		35,822*	
95-97	29,526*		31,983*		24,305*		24,359*		27,451*		30,597*	
98+	6,322*		6,364*		6,178*		5,773*		8,316*		5,616*	
Race/ethnicity												
▶ White	27,773	34,708	26,324	32,994	16,960	21,232	17,702	22,273	19,629	24,658	20,061	25,388
Black	16,240*	24,505	16,189*	24,790	10,993*	17,023	11,331*	17,771	12,539*	19,757	12,692*	20,341
Hispanic	19,888*	24,194	20,342*	26,300	11,354*	14,734	11,875*	15,655	12,750*	17,019	13,261*	17,722
Asian	32,333*	33,474	30,176*	31,663	18,569*	19,358	18,622*	20,002	19,940*	21,950	21,224*	23,682
Other	33,260*	50,358	32,442*	49,272	20,389*	29,610	17,796*	25,476	17,891*	25,901	17,735*	25,932
Unknown	67,681*	...	62,019*	...	38,495*	...	36,477*	...	39,602*	...	43,383*	...
Region												
▶ Northeast	31,945	40,660	31,405	40,105	21,685	27,737	22,156	28,459	24,400	31,288	24,985	32,320
South	26,702*	34,306	25,351*	32,696	15,740*	20,186	16,734*	21,615	18,870*	24,406	19,559*	25,459
Midwest	22,792*	28,410	21,002*	26,265	13,517*	16,868	14,195*	17,815	15,489*	19,359	15,356*	19,362
West	26,691*	34,544	25,508*	33,129	16,196*	21,099	16,074*	21,095	17,322*	22,743	17,649*	23,382

... Data unavailable.

▶ Denotes reference group.

\*Statistically different from reference group (p&lt;.05).

<sup>a</sup>Rate per 100,000 based on enrollment in calendar years for individuals in the same demographic stratum.<sup>b</sup>Rate per 100,000 age-adjusted to the 2005 US standard population (US Population Estimates from Current Population Survey).

SOURCE: Centers for Medicare and Medicaid Services, 5% Standard Analytical Claims Files.

**Table 2-12. Physician office visits by privately insured individuals for benign prostatic hyperplasia listed as any diagnosis, rate,<sup>a</sup> age-adjusted rate<sup>b</sup>**

	2002 (N=202,992)		2003 (N=199,879)		2004 (N=126,916)		2005 (N=146,343)		2006 (N=138,178)	
	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate
Total	4,739	11,943	4,173	11,042	2,594	6,844	2,816	6,930	2,713	7,690
Age										
40-44	1,901*		1,734*		1,286*		1,301*		1,463*	
45-54	5,165*		4,415*		2,594*		2,617*		2,917*	
55-64	15,104*		12,782*		7,088*		7,222*		7,767*	
▶ 65-74	25,078		22,270		13,769		14,015		15,314	
75-84	29,724*		29,995*		20,325*		20,336*		23,595*	
85+	...		25,590*		18,398*		18,809*		20,432*	
Race/ethnicity										
▶ White	5,844	13,515	5,062	12,646	2,714	7,112	2,934	7,207	2,965	8,156
Black	6,280*	11,040	5,606*	10,911	2,881*	6,078	3,060*	5,944	2,685*	6,885
Hispanic	3,766*	10,512	3,294*	9,936	1,799*	5,485	1,806*	5,353	1,816*	5,819
Asian	3,762*	13,367	3,659*	13,018	2,299*	8,286	2,198*	7,549	1,797*	6,612
Other	5,225*	13,475	4,365*	11,938	2,573*	7,078	2,526*	6,676	2,428*	6,338
Unknown	5,797*	...	4,925*	...	2,723*	...	2,948*	...	2,872*	...
Missing	3,874*	...	3,036*	...	2,439*	...	2,900*	...	2,179*	...
Region										
Northeast	5,698*	13,558	5,026*	12,721	3,667*	9,165	3,604*	8,711	3,605*	9,936
South	4,773*	11,905	4,240*	10,933	2,485*	6,594	2,726	6,913	2,719*	7,927
▶ Midwest	4,732	11,631	4,140	10,737	2,518	6,371	2,727	6,367	2,310	6,614
West	3,878*	11,590	3,312*	10,900	2,223*	6,851	2,683*	6,989	2,814*	7,421

... Data unavailable.

▶ Denotes reference group.

\*Statistically different from reference group (p<.05).

<sup>a</sup>Rate per 100,000 based on enrollment in calendar years for individuals in the same demographic stratum.

<sup>b</sup>Rate per 100,000 age-adjusted to the 2005 US standard population (US Population Estimates from Current Population Survey).

SOURCE: i3 Claims Database, 2002-2006.

**Table 2-13. Nationally representative physician office visits for benign prostatic hyperplasia listed as any diagnosis, 2002-2007 (merged), 6-year count**

	<b>6-Year Count</b>
Total	22,828,855
Age	
40-44	468,040
45-54	2,130,417
55-64	5,115,891
65-74	6,449,945
75-84	6,880,298
85+	1,784,264
Race/ethnicity	
White	19,966,634
Black	1,645,359
Hispanic	1,216,862
Region	
Northeast	5,410,737
South	9,208,768
Midwest	4,381,648
West	3,827,702

SOURCE: National Ambulatory Medical Care Survey, 2002-2007; National Hospital Ambulatory Medical Care Survey, 2002-2007.

**Table 2-14. Emergency room visits by Medicare beneficiaries for benign prostatic hyperplasia listed as primary diagnosis, rate,<sup>a</sup> age-adjusted rate<sup>b</sup>**

	2002 (N=83,020)		2003 (N=84,960)		2004 (N=87,340)		2005 (N=88,120)		2006 (N=83,360)		2007 (N=82,500)	
	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate
Total	531.6	651.4	528.5	657.2	533.2	653.1	534.3	666.2	513.2	630.3	507.7	638.0
Under 65/65+												
< 65 Years	158.5*	158.5	148.9*	148.9	166.2*	166.2	154.3*	154.3	164.8*	164.8	148.4*	148.4
▶ 65+ Years	654.6	651.4	656.1	657.2	658.7	653.1	668.5	666.2	637.5	630.3	640.4	638.0
Age												
▶ 65-69	381.9		362.1		381.9		388.1		332.5		362.2	
70-74	580.5*		565.3*		560.1*		590.4*		597.4*		553.8*	
75-79	744.0*		773.0*		807.1*		792.1*		758.1*		716.0*	
80-84	942.5*		1,010*		902.5*		925.7*		906.5*		1,007*	
85-89	1,141*		1,139*		1,128*		1,172*		1,054*		1,093*	
90-94	1,431*		1,294*		1,425*		1,338*		1,337*		1,219*	
95-97	1,185*♦		1,038*♦		1,769*		1,519*		1,435*		1,166*♦	
98+	442.1*♦		218.0*♦		429.0*♦		337.1*♦		699.9*♦		363.6*♦	
Race/ethnicity												
▶ White	528.7	641.4	527.7	644.4	532.3	638.1	539.2	661.8	534.4	642.7	518.6	637.3
Black	567.8*	799.3	557.6*	862.6	555.7*	857.5	531.0*	818.2	375.9*	578.0	454.6*	728.5
Hispanic	471.7*	583.4	441.0*	605.4	499.7*	635.5	572.4*	714.4	425.0*	506.6	475.3*	669.6
Asian	451.4*	426.8	335.2*	297.7	383.6*	361.4	431.6*	454.8	379.9*	388.5	412.0*	424.5
Other	550.0*	829.4	604.9*	899.5	545.0*	767.8	348.9*	475.1	412.3*	584.1	418.8*	586.4
Unknown	1,065*♦	...	1,122*♦	...	1,242*♦	...	1,091*♦	...	1,574*♦	...	701.1*♦	...
Region												
▶ Northeast	554.3	693.4	536.1	679.4	532.1	653.9	528.5	670.2	522.2	633.6	481.2	597.6
South	550.9*	677.7	542.1*	679.4	552.2*	680.1	545.0*	686.5	506.5*	615.3	504.9*	629.7
Midwest	499.4*	593.6	524.0*	633.1	537.2*	636.8	548.3*	663.2	533.8*	653.4	562.5*	696.9
West	509.0*	631.1	496.0*	617.6	486.2*	621.1	497.9*	623.2	490.1*	622.8	468.8*	611.4

... Data unavailable.

▶ Denotes reference group.

\*Statistically different from reference group ( $p < .05$ ).

♦Rate based on a count less than 600, should be interpreted with caution.

<sup>a</sup>Rate per 100,000 based on enrollment in calendar years for individuals in the same demographic stratum.<sup>b</sup>Rate per 100,000 age-adjusted to the 2005 US standard population (US Population Estimates from Current Population Survey).

SOURCE: Centers for Medicare and Medicaid Services, 5% Standard Analytical Claims Files.

**Table 2-15. Emergency room visits by privately insured individuals for benign prostatic hyperplasia listed as primary diagnosis, rate,<sup>a</sup> age-adjusted rate<sup>b</sup>**

	2002 (N=2,131)		2003 (N=2,786)		2004 (N=1,855)		2005 (N=1,790)		2006 (N=763)	
	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate
Total	49.7	149.0	58.2	175.2	37.9	125.7	34.4	107.7	15.0	37.4
Age										
40-44	18.4*		16.3*		7.6*		5.0*		5.3*	
45-54	30.9*		42.2*		23.2*		12.0*		12.1*	
55-64	103.2*		159.7*		69.0*		51.6*		58.1*	
▶ 65-74	349.4		361.7		256.1		236.9		88.2	
75-84	674.1*		607.0*		566.5*		502.7*		64.6*	
85+	...		818.5*		708.3*		637.0*		46.4*♦	
Race/ethnicity										
▶ White	53.9	145.4	53.0	156.5	32.7	114.1	28.7	94.9	7.5	18.4
Black	83.4*	147.4	125.7*	250.9	77.9*	181.3	59.6*	122.7	24.2*	51.0
Hispanic	39.7*	130.9	87.4*	296.1	37.1*	136.9	26.4*	97.9	28.2*	82.9
Asian	23.3*♦	149.3	24.2*♦	95.6	22.9*	139.5	17.0*♦	100.9	3.8*♦	54.2
Other	23.4*♦	100.3	35.8*♦	181.2	13.7*♦	71.7	20.9*♦	203.7	6.1*♦	49.3
Unknown	37.1*	...	62.6*	...	36.8*	...	28.9*	...	11.0*	...
Missing	48.2*	...	57.4*	...	55.1*	...	70.8*	...	49.0*	...
Region										
Northeast	37.8*	97.8	36.9*	102.8	21.0*	65.0	19.6*	65.0	2.3*♦	7.5
South	46.9*	143.3	72.0	200.3	41.1*	135.0	36.6*	118.5	23.4*	53.8
▶ Midwest	71.9	202.4	67.9	208.8	54.4	166.6	52.0	147.0	13.8	47.1
West	11.5*	28.8	6.3*	18.1	3.1*♦	16.5	2.4*♦	7.3	1.8*♦	4.6

... Data unavailable.

▶ Denotes reference group.

\*Statistically different from reference group ( $p < .05$ ).

♦Rate based on a count less than 30, should be interpreted with caution.

<sup>a</sup>Rate per 100,000 based on enrollment in calendar years for individuals in the same demographic stratum.

<sup>b</sup>Rate per 100,000 age-adjusted to the 2005 US standard population (US Population Estimates from Current Population Survey).

SOURCE: i3 Claims Database, 2002-2006.



**Table 2-16. Nationally representative emergency room visits for benign prostatic hyperplasia listed as primary diagnosis, 2002-2007 (merged), 6-year count**

	6-Year Count
Total	1,192,311
Age	
40-44	28,949
45-54	105,317
55-64	158,417
65-74	407,081
75-84	334,856
85+	157,691
Race/ethnicity	
White	1,019,534
Black	138,324
Hispanic	29,273
Asian	5,180
Region	
Northeast	275,322
South	474,699
Midwest	233,403
West	208,887

SOURCE: National Ambulatory Medical Care Survey, 2002-2007; National Hospital Ambulatory Medical Care Survey, 2002-2007.

**Table 2-17. Use of inpatient surgical procedures to treat symptoms of benign prostatic hyperplasia, count**

Procedure	2002	2003	2004	2005	2006	2007
Laser prostatectomy	1,622	1,815	2,694	5,616	6,980	7,049
Open prostatectomy	4,538	4,649	3,430	3,311	3,025	3,214
TUMT	†	†	†	†	†	†
TUNA	†	†	190	†	†	158
TURP	101,436	84,221	64,122	59,090	55,197	50,246

TUMT: Transurethral microwave therapy.

TUNA: Transurethral needle ablation.

TURP: Transurethral resection of the prostate.

† Figure does not meet standard for reliability or precision.

SOURCE: Healthcare Cost and Utilization Project Nationwide Inpatient Sample, 2002-2007.

**Table 2-18. Surgical procedures among Medicare beneficiaries for symptomatic treatment of benign prostatic hyperplasia, count,<sup>a</sup> percent<sup>b</sup>**

	2002		2003		2004		2005		2006		2007	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Total	113,480	3.01%	112,760	3.26%	108,140	4.54%	124,720	5.08%	124,340	4.78%	120,000	4.58%
Open prostatectomy	3,220	0.09%	3,140	0.09%	2,640	0.11%	2,180	0.09%	1,740	0.07%	1,520	0.06%
Ambulatory Surgery Center	20	0.00%	0	0.00%	20	0.00%	0	0.00%	0	0.00%	0	0.00%
Hospital Outpatient	0	0.00%	60	0.00%	0	0.00%	0	0.00%	0	0.00%	20	0.00%
Inpatient	3,160	0.08%	3,080	0.09%	2,600	0.11%	2,140	0.09%	1,740	0.07%	1,480	0.06%
Physician Office	40	0.00%	0	0.00%	20	0.00%	40	0.00%	0	0.00%	20	0.00%
TUNA	7,120	0.19%	7,540	0.22%	7,280	0.31%	7,120	0.29%	6,080	0.23%	6,820	0.26%
Ambulatory Surgery Center	840	0.02%	600	0.02%	620	0.03%	380	0.02%	240	0.01%	180	0.01%
Hospital Outpatient	80	0.00%	100	0.00%	220	0.01%	60	0.00%	100	0.00%	120	0.00%
Inpatient	120	0.00%	80	0.00%	120	0.01%	120	0.00%	40	0.00%	140	0.01%
Physician Office	6,080	0.16%	6,760	0.20%	6,320	0.27%	6,560	0.27%	5,700	0.22%	6,380	0.24%
TURP	78,580	2.09%	70,420	2.03%	54,520	2.29%	53,420	2.17%	46,620	1.79%	44,240	1.69%
Ambulatory Surgery Center	12,040	0.32%	11,760	0.34%	9,780	0.41%	10,940	0.45%	10,140	0.39%	10,760	0.41%
Hospital Outpatient	1,660	0.04%	1,560	0.05%	1,100	0.05%	1,380	0.06%	1,240	0.05%	1,340	0.05%
Inpatient	63,180	1.68%	55,600	1.61%	42,640	1.79%	39,880	1.62%	34,240	1.32%	30,940	1.18%
Physician Office	1,700	0.05%	1,500	0.04%	1,000	0.04%	1,220	0.05%	1,000	0.04%	1,200	0.05%
Laser prostatectomy	7,460	0.20%	11,900	0.34%	21,680	0.91%	36,120	1.47%	41,860	1.61%	41,500	1.58%
Ambulatory Surgery Center	3,700	0.10%	5,400	0.16%	10,700	0.45%	20,420	0.83%	25,360	0.97%	25,840	0.99%
Hospital Outpatient	300	0.01%	460	0.01%	820	0.03%	2,300	0.09%	2,120	0.08%	2,320	0.09%
Inpatient	1,520	0.04%	1,780	0.05%	3,440	0.14%	4,860	0.20%	6,100	0.23%	6,500	0.25%
Physician Office	1,940	0.05%	4,260	0.12%	6,720	0.28%	8,540	0.35%	8,280	0.32%	6,840	0.26%
TUIP	1,480	0.04%	1,640	0.05%	1,720	0.07%	1,320	0.05%	1,340	0.05%	1,220	0.05%
Ambulatory Surgery Center	720	0.02%	960	0.03%	900	0.04%	840	0.03%	820	0.03%	780	0.03%
Hospital Outpatient	140	0.00%	80	0.00%	120	0.01%	100	0.00%	40	0.00%	120	0.00%
Inpatient	500	0.01%	520	0.02%	580	0.02%	260	0.01%	300	0.01%	220	0.01%
Physician Office	120	0.00%	80	0.00%	120	0.01%	120	0.00%	180	0.01%	100	0.00%
TUMT	15,620	0.41%	18,120	0.52%	20,300	0.85%	24,560	1.00%	26,700	1.03%	24,700	0.94%
Ambulatory Surgery Center	1,460	0.04%	580	0.02%	200	0.01%	140	0.01%	140	0.01%	200	0.01%
Hospital Outpatient	300	0.01%	300	0.01%	300	0.01%	200	0.01%	240	0.01%	180	0.01%
Inpatient	140	0.00%	80	0.00%	100	0.00%	80	0.00%	200	0.01%	160	0.01%
Physician Office	13,720	0.36%	17,160	0.50%	19,700	0.83%	24,140	0.98%	26,120	1.00%	24,160	0.92%

TUNA: Transurethral needle ablation.

TURP: Transurethral resection of the prostate.

TUIP: Transurethral incision of the prostate.

TUMT: Transurethral microwave therapy.

<sup>a</sup>Unweighted counts multiplied by 20 to arrive at counts in table.<sup>b</sup>Percentage of adult Medicare beneficiaries with a diagnosis of benign prostatic hyperplasia and/or lower urinary tract symptoms.

NOTE: Counts less than 600 should be interpreted with caution.

SOURCE: Centers for Medicare and Medicaid Services, 5% Carrier and Outpatient Files, 2002-2007.

**Table 2-19. Use of imaging tests in Medicare beneficiaries for evaluation of benign prostatic hyperplasia and/or lower urinary tract symptoms, count,<sup>a</sup> percent<sup>b</sup>**

	2003		2004		2005		2006		2007	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Total	47,040	1.36%	21,940	0.92%	22,060	0.90%	21,560	0.83%	20,120	0.77%
Intravenous pyelogram	6,840	0.20%	2,780	0.12%	1,800	0.07%	1,560	0.06%	840	0.03%
Ambulatory Surgery Center	560	0.02%	260	0.01%	160	0.01%	160	0.01%	60	0.00%
Hospital Outpatient	3,040	0.09%	960	0.04%	620	0.03%	600	0.02%	280	0.01%
Inpatient	420	0.01%	200	0.01%	120	0.00%	100	0.00%	80	0.00%
Physician Office	2,820	0.08%	1,360	0.06%	900	0.04%	700	0.03%	420	0.02%
Transrectal Ultrasound	24,020	0.69%	13,600	0.57%	15,000	0.61%	14,440	0.55%	13,920	0.53%
Ambulatory Surgery Center	1,840	0.05%	820	0.03%	860	0.04%	640	0.02%	680	0.03%
Hospital Outpatient	2,320	0.07%	500	0.02%	640	0.03%	460	0.02%	720	0.03%
Inpatient	600	0.02%	260	0.01%	560	0.02%	500	0.02%	320	0.01%
Physician Office	19,260	0.56%	12,020	0.50%	12,940	0.53%	12,840	0.49%	12,200	0.47%
CT scan abdomen/pelvis	16,180	0.47%	5,560	0.23%	5,260	0.21%	5,560	0.21%	5,360	0.20%
Ambulatory Surgery Center	600	0.02%	300	0.01%	420	0.02%	380	0.01%	300	0.01%
Hospital Outpatient	8,780	0.25%	2,340	0.10%	1,940	0.08%	2,060	0.08%	2,120	0.08%
Inpatient	2,320	0.07%	1,300	0.05%	1,040	0.04%	1,120	0.04%	1,060	0.04%
Physician Office	4,480	0.13%	1,620	0.07%	1,860	0.08%	2,000	0.08%	1,880	0.07%

<sup>a</sup>Unweighted counts multiplied by 20 to arrive at counts in table.

<sup>b</sup>Percentage of men with a diagnosis of benign prostatic hyperplasia who had each test.

NOTE: Counts less than 600 should be interpreted with caution.

SOURCE: Centers for Medicare and Medicaid Services, 5% Carrier and Outpatient Files, 2003-2007.

**Table 2-20. Nationally representative inpatient stays for bladder stones listed as primary diagnosis, rate,<sup>a</sup> age-adjusted rate<sup>b</sup>**

	2002 (N=5,367)		2003 (N=4,564)		2004 (N=4,596)		2005 (N=4,141)		2006 (N=4,019)		2007 (N=3,559)	
	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate
Total	5.3	8.8	4.4	7.4	4.4	7.8	3.9	6.8	3.8	6.5	3.3	5.7
Age												
40-44	0.5		0.7		0.9		0.8		0.6		0.6	
45-54	1.5		1.2		1.5		0.8		1.2		1.1	
55-64	5.9		5.3		5.2		4.4		3.7		3.2	
▶ 65-74	21.8		19.5		16.9		16.1		15.4		12.2	
75-84	31.4*		24.1*		30.4*		28.1*		25.2*		23.7*	
85+	51.0*		36.1*		40.4*		29.9*		35.9*		32.5*	
Race/ethnicity												
▶ White	3.9	6.6	3.8	5.9	3.9	6.3	3.8	6.0	3.3	5.3	2.9	4.6
Black	2.6*	4.9	2.3*	4.1	2.1*	4.1	1.5*	3.7	1.7*	3.9	1.7*	3.3
Hispanic	†	†	2.0*	4.9	1.4*	3.6	1.4*	3.5	2.1*	5.2	1.3*	3.2
Asian	1.3*	6.3	1.8*	8.0	2.1*	5.2	0.8*	3.6	1.6*	4.0	1.8*	4.4
Other	12.8*	33.8	4.8*	10.0	3.6*	10.1	4.9*	23.9	5.9*	14.3	3.3*	13.9
Region												
Northeast	8.2	12.7	6.8	10.3	6.7	11.1	6.8	11.2	5.4	8.9	5.3	8.7
South	4.9	8.2	3.9	6.5	4.2	7.2	3.6	6.3	3.8	6.6	2.8	4.7
▶ Midwest	5.0	8.7	4.1	7.1	4.0	7.2	3.1	5.3	3.7	6.3	3.1	5.3
West	3.6*	6.6	3.5*	6.1	3.3*	6.1	2.9*	5.3	2.5*	4.5	2.7*	5.0

▶ Denotes reference group.

\*Statistically different from reference group ( $p < .05$ ).

† Figure does not meet standard for reliability or precision.

<sup>a</sup>Rate per 100,000 males aged 40 and up, based on 2002-2007 population estimates from Current Population Survey (CPS).

<sup>b</sup>Rate per 100,000 age-adjusted to the 2005 US standard population (US Population Estimates from Current Population Survey).

SOURCE: Healthcare Cost and Utilization Project Nationwide Inpatient Sample, 2002-2007.

**Table 2-21. Inpatient stays by Medicare beneficiaries for bladder stones listed as primary diagnosis, rate,<sup>a</sup> age-adjusted rate<sup>b</sup>**

	2002 (N=2,640)		2003 (N=1,960)		2004 (N=1,900)		2005 (N=1,640)		2006 (N=1,800)		2007 (N=1,660)	
	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate
Total	16.9	20.0	12.2	15.1	11.6	14.7	9.9	12.0	11.1	14.1	10.2	12.4
Under 65/65+												
< 65 Years	6.2 <sup>*♦</sup>	6.2	4.0 <sup>*♦</sup>	4.0	2.9 <sup>*♦</sup>	2.9	4.2 <sup>*♦</sup>	4.2	2.8 <sup>*♦</sup>	2.8	5.0 <sup>*♦</sup>	5.0
▶ 65+ Years	20.4	20.0	15.0	15.1	14.6	14.7	12.0	12.0	14.0	14.1	12.1	12.4
Age												
▶ 65-69	13.3 <sup>*</sup>		5.9 <sup>*</sup>		5.2 <sup>*</sup>		4.6 <sup>*</sup>		7.8 <sup>*</sup>		5.7 <sup>*</sup>	
70-74	18.9 <sup>*♦</sup>		11.0 <sup>*♦</sup>		20.2 <sup>*</sup>		13.2 <sup>*♦</sup>		16.3 <sup>*♦</sup>		8.3 <sup>*♦</sup>	
75-79	24.5 <sup>*</sup>		16.9 <sup>*♦</sup>		13.7 <sup>*♦</sup>		13.1 <sup>*♦</sup>		14.4 <sup>*♦</sup>		11.3 <sup>*♦</sup>	
80-84	30.8 <sup>*♦</sup>		21.0 <sup>*♦</sup>		22.9 <sup>*♦</sup>		22.6 <sup>*♦</sup>		20.5 <sup>*♦</sup>		20.9 <sup>*♦</sup>	
85-89	19.1 <sup>*♦</sup>		47.4 <sup>*♦</sup>		22.9 <sup>*♦</sup>		15.2 <sup>*♦</sup>		19.8 <sup>*♦</sup>		38.1 <sup>*♦</sup>	
90-94	42.8 <sup>*♦</sup>		40.7 <sup>*♦</sup>		15.7 <sup>*♦</sup>		22.7 <sup>*♦</sup>		22.5 <sup>*♦</sup>		22.0 <sup>*♦</sup>	
95-97	53.9 <sup>*♦</sup>		51.9 <sup>*♦</sup>		50.5 <sup>*♦</sup>		0.0 <sup>*♦</sup>		0.0 <sup>*♦</sup>		0.0 <sup>*♦</sup>	
98+	0.0 <sup>*♦</sup>		...		0.0 <sup>*♦</sup>		...		...		...	
Race/ethnicity												
▶ White	17.8	20.7	12.8	15.4	12.4	15.4	10.5	12.6	11.8	14.6	11.4	13.8
Black	9.3 <sup>*♦</sup>	11.4	6.4 <sup>*♦</sup>	11.7	6.3 <sup>*♦</sup>	8.4	5.0 <sup>*♦</sup>	7.0	3.8 <sup>*♦</sup>	4.0	5.1 <sup>*♦</sup>	7.7
Hispanic	32.3 <sup>*♦</sup>	55.8	6.2 <sup>*♦</sup>	20.6	6.0 <sup>*♦</sup>	11.3	11.7 <sup>*♦</sup>	10.2	18.0 <sup>*♦</sup>	33.9	0.0 <sup>*♦</sup>	0.0
Asian	9.4 <sup>*♦</sup>	24.4	17.6 <sup>*♦</sup>	30.5	0.0 <sup>*♦</sup>	0.0	0.0 <sup>*♦</sup>	...	7.8 <sup>*♦</sup>	42.1	0.0 <sup>*♦</sup>	0.0
Other	7.1 <sup>*♦</sup>	23.8	19.5 <sup>*♦</sup>	72.5	18.6 <sup>*♦</sup>	29.9	11.6 <sup>*♦</sup>	16.2	11.3 <sup>*♦</sup>	17.9	5.4 <sup>*♦</sup>	0.0
Unknown	...	...	...	...	0.0 <sup>*♦</sup>	...	77.9 <sup>*♦</sup>	...	0.0 <sup>*♦</sup>	...	...	...
Region												
▶ Northeast	21.9	27.6	15.0 <sup>*</sup>	15.8	13.6 <sup>*</sup>	16.1	11.6 <sup>*</sup>	14.5	17.8 <sup>*</sup>	21.2	13.8 <sup>*</sup>	18.9
South	14.2 <sup>*</sup>	15.2	10.6 <sup>*</sup>	13.6	11.3 <sup>*</sup>	14.6	9.1 <sup>*♦</sup>	10.7	10.5 <sup>*</sup>	13.6	8.6 <sup>*♦</sup>	10.7
Midwest	18.4 <sup>*</sup>	23.1	11.0 <sup>*♦</sup>	14.0	11.4 <sup>*♦</sup>	14.2	9.4 <sup>*♦</sup>	11.1	8.0 <sup>*♦</sup>	10.6	10.2 <sup>*♦</sup>	10.1
West	15.1 <sup>*♦</sup>	18.1	14.4 <sup>*♦</sup>	19.4	10.5 <sup>*♦</sup>	13.7	10.9 <sup>*♦</sup>	13.4	9.6 <sup>*♦</sup>	13.0	10.1 <sup>*♦</sup>	12.4

... Data unavailable.

▶ Denotes reference group.

\*Statistically different from reference group (p&lt;.05).

♦Rate based on a count less than 600, should be interpreted with caution.

<sup>a</sup>Rate per 100,000 males aged 40 and up, based on enrollment in calendar years for individuals in the same demographic stratum.<sup>b</sup>Rate per 100,000 age-adjusted to the 2005 US standard population (US Population Estimates from Current Population Survey).

SOURCE: Centers for Medicare and Medicaid Services, 5% Standard Analytical Claims Files.

**Table 2-22. Inpatient stays by privately insured individuals for bladder stones listed as primary diagnosis, rate,<sup>a</sup> age-adjusted rate<sup>b</sup>**

	2002 (N=136)		2003 (N=169)		2004 (N=152)		2005 (N=157)		2006 (N=135)	
	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate
Total	3.2	9.4	3.5	11.0	3.1	9.6	3.0	8.5	2.7	8.0
Age										
40-44	0.9 <sup>*♦</sup>		0.8 <sup>*♦</sup>		0.9 <sup>*♦</sup>		0.9 <sup>*♦</sup>		0.8 <sup>*♦</sup>	
45-54	1.5 <sup>*♦</sup>		2.5 <sup>*♦</sup>		2.9 <sup>*</sup>		2.5 <sup>*♦</sup>		2.6 <sup>*♦</sup>	
55-64	8.2 <sup>*</sup>		8.2 <sup>*</sup>		5.2 <sup>*</sup>		4.9 <sup>*</sup>		7.7 <sup>*</sup>	
▶ 65-74	24.4		28.2		21.6		18.7		15.9 <sup>♦</sup>	
75-84	36.4 <sup>*</sup>		39.2 <sup>*</sup>		40.2 <sup>*</sup>		36.8 <sup>*</sup>		25.1 <sup>*♦</sup>	
85+	...		36.6 <sup>*♦</sup>		34.5 <sup>*♦</sup>		26.3 <sup>*♦</sup>		36.1 <sup>*♦</sup>	
Race/ethnicity										
▶ White	4.2	11.1	4.0	11.4	2.8	8.9	3.6	10.6	3.2	9.4
Black	5.9 <sup>*♦</sup>	26.5	6.4 <sup>*♦</sup>	33.7	4.4 <sup>*♦</sup>	19.2	1.0 <sup>*♦</sup>	5.8	1.1 <sup>*♦</sup>	8.8
Hispanic	1.8 <sup>*♦</sup>	8.2	4.2 <sup>*♦</sup>	20.6	2.6 <sup>*♦</sup>	11.4	1.6 <sup>*♦</sup>	9.4	1.8 <sup>*♦</sup>	10.2
Asian	4.4 <sup>*♦</sup>	33.0	2.0 <sup>*♦</sup>	8.0	2.1 <sup>*♦</sup>	21.7	1.3 <sup>*♦</sup>	39.9	1.9 <sup>*♦</sup>	29.6
Other	...	...	3.3 <sup>*♦</sup>	303.0	6.8 <sup>*♦</sup>	184.1	...	...	...	...
Unknown	5.6 <sup>*♦</sup>	...	4.9 <sup>*♦</sup>	...	3.6 <sup>*♦</sup>	...	1.8 <sup>*♦</sup>	...	1.8 <sup>*♦</sup>	...
Missing	2.2 <sup>*</sup>	...	2.5 <sup>*</sup>	...	4.1 <sup>*</sup>	...	2.8 <sup>*♦</sup>	...	1.8 <sup>*♦</sup>	...
Region										
Northeast	5.5 <sup>*</sup>	13.8	4.7 <sup>*</sup>	17.8	4.5 <sup>*</sup>	12.1	5.2 <sup>*</sup>	18.9	4.3 <sup>♦</sup>	14.4
South	2.1 <sup>*</sup>	6.4	3.2	9.9	2.8	9.6	2.7	8.3	2.1	8.0
▶ Midwest	3.9	11.2	3.7	11.2	3.1	10.4	3.1	7.8	2.9	8.1
West	2.7 <sup>*♦</sup>	10.6	3.1 <sup>*♦</sup>	10.8	3.1 <sup>*♦</sup>	12.8	1.9 <sup>*♦</sup>	6.7	2.4 <sup>*♦</sup>	6.5

... Data unavailable.

▶ Denotes reference group.

\*Statistically different from reference group ( $p < .05$ ).

♦Rate based on a count less than 30, should be interpreted with caution.

<sup>a</sup>Rate per 100,000 males aged 40 and up, based on enrollment in calendar years for individuals in the same demographic stratum.

<sup>b</sup>Rate per 100,000 age-adjusted to the 2005 US standard population (US Population Estimates from Current Population Survey).

SOURCE: i3 Claims Database, 2002-2006.

**Table 2-23. Hospital outpatient visits by Medicare beneficiaries for bladder stones listed as primary diagnosis, rate,<sup>a</sup> age-adjusted rate<sup>b</sup>**

	2002 (N=480)		2003 (N=560)		2004 (N=520)		2005 (N=340)		2006 (N=820)		2007 (N=640)	
	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate
Total	3.1*	3.5	3.5*	4.1	3.2*	2.4	2.1*	1.5	5.0	6.3	3.9	4.9
Under 65/65+												
< 65 Years	2.6**	2.6	2.5**	2.5	5.7**	5.7	3.3**	3.3	0.9**	0.9	1.8**	1.8
▶ 65+ Years	3.2*	3.5	3.8*	4.1	2.3*	2.4	1.6*	1.5	6.5	6.3	4.7*	4.9
Age												
▶ 65-69	2.2*		1.6*		1.0*		1.0*		9.4*		5.2*	
70-74	2.6**		1.9**		2.6**		0.0**		3.4**		2.8**	
75-79	4.1**		5.6**		2.4**		0.0**		5.9**		6.1**	
80-84	2.6**		7.4**		4.8**		8.3**		6.0**		6.1**	
85-89	10.9**		10.5**		2.5**		0.0**		4.9**		4.8**	
90-94	0.0**		0.0**		0.0**		7.6**		15.0**		0.0**	
Race/ethnicity												
▶ White	3.2*	3.7	2.9*	3.6	2.9*	2.0	1.9*	1.0	4.5	5.7	4.2*	5.2
Black	2.7**	0.0	5.1**	4.1	3.8**	4.8	2.5**	9.0	3.8**	19.0	2.6**	3.0
Hispanic	0.0**	0.0	18.6**	158.7	12.0**	24.4	0.0**	0.0	18.0**	57.1	0.0**	0.0
Asian	...	...	...	...	...	...	7.8**	65.0	7.8**	65.7	...	...
Other	7.1**	28.1	6.5**	38.6	6.2**	72.6	5.8**	19.7	16.9**	57.5	0.0**	0.0
Unknown	...	...	...	...	...	...	...	...	0.0**	...	87.6**	...
Region												
▶ Northeast	3.3*	3.1	11.1*	13.9	8.4*	3.5	2.6*	0.9	9.9*	12.6	5.9*	6.8
South	4.0**	4.8	1.3**	1.8	2.8**	3.0	1.3**	0.9	3.8**	5.4	2.5**	2.7
Midwest	2.6**	2.4	1.0**	1.3	1.5**	2.2	2.0**	2.2	2.0**	2.2	3.6**	5.3
West	1.5**	2.0	3.6**	2.9	0.7**	0.0	3.4**	2.8	6.9**	7.8	5.4**	7.5

... Data unavailable.

▶ Denotes reference group.

\*Statistically different from reference group (p&lt;.05).

\*Rate based on a count less than 600, should be interpreted with caution.

<sup>a</sup>Rate per 100,000 males aged 40 and up, based on enrollment in calendar years for individuals in the same demographic stratum.<sup>b</sup>Rate per 100,000 age-adjusted to the 2005 US standard population (US Population Estimates from Current Population Survey).

SOURCE: Centers for Medicare and Medicaid Services, 5% Standard Analytical Claims Files.

**Table 2-24. Hospital outpatient visits by privately insured individuals for bladder stones listed as primary diagnosis, rate,<sup>a</sup> age-adjusted rate<sup>b</sup>**

	2002 (N=488)		2003 (N=557)		2004 (N=534)		2005 (N=624)		2006 (N=549)	
	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate
Total	11.4	27.8	11.6	31.3	10.9	30.3	12.0	29.6	10.8	32.5
Age										
40-44	9.3*		5.9*		4.0* <sup>‡</sup>		6.6*		4.2* <sup>‡</sup>	
45-54	10.5*		11.3*		9.6*		10.8*		10.3*	
55-64	37.3*		32.2*		27.8*		30.9*		31.3*	
▶ 65-74	59.5		80.3		74.4		59.4		68.6	
75-84	58.2*		76.0*		99.3*		95.4*		111.3*	
85+	...		50.3* <sup>‡</sup>		38.9* <sup>‡</sup>		42.7* <sup>‡</sup>		77.4* <sup>‡</sup>	
Race/ethnicity										
▶ White	13.6	30.2	15.5	39.7	12.6	35.2	13.4	33.2	11.9	33.1
Black	8.2* <sup>‡</sup>	19.9	7.2* <sup>‡</sup>	19.1	9.3* <sup>‡</sup>	51.5	6.1* <sup>‡</sup>	16.1	13.4* <sup>‡</sup>	41.0
Hispanic	8.9* <sup>‡</sup>	25.4	9.2* <sup>‡</sup>	27.4	4.9* <sup>‡</sup>	16.5	5.3* <sup>‡</sup>	17.3	6.4* <sup>‡</sup>	24.6
Asian	1.5* <sup>‡</sup>	18.0	5.0* <sup>‡</sup>	25.6	5.0* <sup>‡</sup>	18.0	5.2* <sup>‡</sup>	21.4	3.2* <sup>‡</sup>	23.4
Other	...	...	9.8* <sup>‡</sup>	84.3	13.7* <sup>‡</sup>	57.3	14.6* <sup>‡</sup>	54.3	18.4* <sup>‡</sup>	64.2
Unknown	20.4*	...	14.8*	...	8.7* <sup>‡</sup>	...	5.9* <sup>‡</sup>	...	11.3*	...
Missing	9.8*	...	7.5*	...	9.5*	...	15.5*	...	8.3*	...
Region										
Northeast	13.3	32.1	14.0	36.5	13.1	33.8	12.3	31.8	14.9*	38.6
South	11.9	29.3	11.1	30.8	10.8	29.9	11.9	31.3	9.3*	29.4
▶ Midwest	10.6	25.2	11.6	29.5	11.4	30.3	12.2	27.9	11.7	36.0
West	10.2*	27.0	11.6*	34.9	8.3*	29.4	11.7*	27.9	10.4*	30.2

... Data unavailable.

▶ Denotes reference group.

\*Statistically different from reference group ( $p < .05$ ).

<sup>‡</sup>Rate based on a count less than 30, should be interpreted with caution.

<sup>a</sup>Rate per 100,000 males aged 40 and up, based on enrollment in calendar years for individuals in the same demographic stratum.

<sup>b</sup>Rate per 100,000 age-adjusted to the 2005 US standard population (US Population Estimates from Current Population Survey).

SOURCE: i3 Claims Database, 2002-2006.

**Table 2-25. Ambulatory surgery center visits by Medicare beneficiaries for bladder stones listed as primary diagnosis, rate,<sup>a</sup> age-adjusted rate<sup>b</sup>**

	2002 (N=4,300)		2003 (N=4,680)		2004 (N=4,600)		2005 (N=4,560)		2006 (N=4,940)		2007 (N=4,160)	
	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate
Total	35.7	44.6	36.7	45.3	37.0	46.0	34.1	42.0	39.4	48.6	34.3	43.1
Age												
▶ 65-69	30.4		30.4		29.0		27.2		31.2		39.1	
70-74	41.7*		34.4*		50.3*		42.2*		53.1*		40.7*	
75-79	52.3*		54.6*		49.8*		50.1*		53.2*		40.8*	
80-84	74.5*		75.4*		66.4*		61.9*		59.2*		57.7*	
85-89	35.5*♦		57.9*♦		53.3*♦		42.9*♦		71.7*♦		45.2*♦	
90-94	34.3*♦		48.8*♦		39.2*♦		15.1*♦		67.6*♦		44.1*♦	
95-97	...		...		...		0.0*♦		...		...	
Race/ethnicity												
▶ White	39.5	47.6	39.9	48.5	40.7	49.7	36.8	43.9	43.1	51.9	36.6	44.6
Black	13.3*♦	25.5	20.6*♦	32.5	12.5*♦	21.8	18.7*♦	32.0	12.7*♦	24.9	23.0*♦	48.7
Hispanic	0.0*♦	0.0	12.4*♦	44.5	12.0*♦	43.2	23.4*♦	55.7	29.9*♦	51.7	23.5*♦	69.6
Asian	0.0*♦	0.0	26.5*♦	72.8	16.7*♦	92.9	23.5*♦	60.3	31.0*♦	55.4	14.7*♦	27.4
Other	35.7*♦	61.8	6.5*♦	22.3	43.4*♦	45.6	17.4*♦	39.4	28.2*♦	18.8	21.5*♦	33.6
Unknown	152.1*♦	...	80.1*♦	...	0.0*♦	...	...	...	82.9*♦	...	87.6*♦	...
Region												
▶ Northeast	41.2	51.7	46.4	57.2	43.3	52.1	42.6	54.2	49.3	61.1	35.5	43.9
South	35.0*	44.5	33.0*	39.8	32.6*	41.1	29.1*	35.7	34.9*	44.1	33.6*	43.9
Midwest	37.8*	45.5	42.5*	54.7	44.5*	55.6	38.9*	47.3	43.1*	53.6	40.2*	49.5
West	28.0*	35.5	26.0*	29.2	29.3*	35.4	29.2*	35.0	33.7*	38.1	26.9*	31.3

... Data unavailable.

▶ Denotes reference group.

\*Statistically different from reference group ( $p < .05$ ).

♦Rate based on a count less than 600, should be interpreted with caution.

<sup>a</sup>Rate per 100,000 males aged 40 and up, based on enrollment in calendar years for individuals in the same demographic stratum.<sup>b</sup>Rate per 100,000 age-adjusted to the 2005 US standard population (US Population Estimates from Current Population Survey).

SOURCE: Centers for Medicare and Medicaid Services, 5% Standard Analytical Claims Files.



**Table 2-26. Ambulatory surgery center visits by privately insured individuals for bladder stones listed as primary diagnosis, rate,<sup>a</sup> age-adjusted rate<sup>b</sup>**

	2002 (N=44)		2003 (N=73)		2004 (N=66)		2005 (N=92)		2006 (N=78)	
	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate
Total	1.0	2.8	1.5	3.9	1.3	3.1	1.8	4.1	1.5	4.4
Age										
40-44	0.5**		0.6**		0.3**		0.5**		0.8**	
45-54	0.9**		2.1**		1.4**		1.3**		1.2**	
55-64	2.6**		4.3*		5.2		5.9*		5.6	
▶ 65-74	7.1*		7.0*		6.2*		10.4*		4.3*	
75-84	8.3**		11.0**		4.7**		7.6**		18.0**	
85+	...		4.6**		4.3**		6.6**		15.5**	
Race/Ethnicity										
▶ White	1.5*	3.9	1.7	4.6	1.5	3.4	2.0	4.6	1.6	4.5
Black	...	...	3.2**	9.3	1.6**	9.7	1.0**	3.1	1.1**	3.2
Hispanic	...	...	1.1**	3.1	0.3**	108.7	0.5**	1.9	1.6**	6.2
Asian	1.5**	11.5	...	...	...	...	...	...	...	...
Unknown	1.9*	...	2.2**	...	1.3**	...	1.8**	...	2.1**	...
Missing	0.7**	...	1.2**	...	1.8**	...	2.4**	...	1.7**	...
Region										
Northeast	1.5*	9.7	3.0**	9.6	0.9*	3.1	1.6*	8.7	2.3**	7.6
South	0.9*	2.4	1.8*	4.6	1.7	4.2	2.1*	5.5	1.5	4.2
▶ Midwest	1.0*	3.3	0.7*	1.6	1.3*	3.7	1.3*	3.3	1.2*	3.2
West	1.3**	2.7	1.4**	4.6	0.8**	2.7	1.9**	6.2	1.5**	4.3

... Data unavailable.

▶ Denotes reference group.

\*Statistically different from reference group (p<.05).

†Rate based on a count less than 30, should be interpreted with caution.

<sup>a</sup>Rate per 100,000 males aged 40 and up, based on enrollment in calendar years for individuals in the same demographic stratum.

<sup>b</sup>Rate per 100,000 age-adjusted to the 2005 US standard population (US Population Estimates from Current Population Survey).

SOURCE: i3 Claims Database, 2002-2006.

**Table 2-27. Nationally representative ambulatory surgery center visits for bladder stones listed as primary diagnosis, count, rate<sup>a</sup>**

	Count	Rate
Total	14,580	6.6
Age		
45-54	138	0.3*
55-64	4,662	15.0
▶ 65-74	5,620	30.3
75-84	3,216	24.8*
75-84	944	23.7*

▶ Denotes reference group.

\*Statistically different from reference group (p<.05).

<sup>a</sup>Rate per 100,000 males aged 40 and up, based on 2006 population estimates from Current Population Survey (CPS).

SOURCE: National Survey of Ambulatory Surgery, 2006.

**Table 2-28. Physician office visits by Medicare beneficiaries for bladder stones listed as any diagnosis, rate,<sup>a</sup> age-adjusted rate<sup>b</sup>**

	2002 (N=21,200)		2003 (N=23,520)		2004 (N=24,340)		2005 (N=26,660)		2006 (N=29,860)		2007 (N=29,420)	
	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate
Total	135.7	169.5	146.3	185.2	148.6	188.7	161.7	206.3	183.8	238.1	181.1	235.7
Under 65/65+												
< 65 Years	34.1*	34.1	46.5*	46.5	45.5*	45.5	41.8*	41.8	47.3*	47.3	41.1*	41.1
▶ 65+ Years	169.3	169.5	179.9	185.2	183.8	188.7	204.0	206.3	232.5	238.1	232.7	235.7
Age												
▶ 65-69	110.5		114.1		109.2		116.5		141.0		150.3	
70-74	159.4*		141.5*		192.6*		203.8*		228.6*		186.9*	
75-79	199.5*		250.4*		211.2*		258.0*		275.2*		290.2*	
80-84	258.1*		292.9*		299.2*		277.2*		331.2*		358.6*	
85-89	193.8*		228.9*		231.2*		300.6*		378.5*		349.9*	
90-94	265.7*		105.8*♦		94.0*♦		264.6*		225.3*		345.1*	
95-97	107.8*♦		51.9*♦		101.1*♦		284.9*♦		95.6*♦		93.3*♦	
Race/ethnicity												
▶ White	145.9	178.8	157.5	196.3	158.7	196.6	173.6	216.5	195.8	246.8	196.8	249.4
Black	66.3*	97.6	73.2*	105.2	64.0*	111.3	80.0*	123.9	86.4*	137.9	79.4*	142.3
Hispanic	58.2*♦	87.4	111.8*♦	181.7	102.3*♦	108.0	116.8*♦	241.8	155.6*♦	227.3	88.0*♦	136.2
Asian	65.8*♦	146.8	70.6*♦	84.4	66.7*♦	120.9	86.3*♦	157.5	232.6*	261.0	161.8*♦	182.8
Other	150.0*♦	230.2	97.6*♦	151.9	235.4*	337.9	127.9*♦	214.4	135.5*♦	168.0	128.9*♦	173.7
Unknown	304.2*♦	...	320.5*♦	...	219.1*♦	...	545.6*♦	...	331.4*♦	...	175.3*♦	...
Region												
▶ Northeast	186.8	238.6	205.7	264.1	206.9	269.6	238.4	306.1	278.9	363.4	261.6	351.8
South	132.1*	163.2	134.6*	166.0	142.4*	177.2	141.5*	179.5	171.4*	220.5	169.5*	219.2
Midwest	107.4*	133.7	125.5*	160.0	117.6*	150.3	130.4*	164.7	126.3*	162.4	146.7*	185.9
West	128.0*	160.7	137.2*	176.0	143.2*	179.3	167.8*	217.8	190.4*	246.8	168.6*	220.2

... Data unavailable.

▶ Denotes reference group.

\*Statistically different from reference group ( $p < .05$ ).

♦Rate based on a count less than 600, should be interpreted with caution.

<sup>a</sup>Rate per 100,000 males aged 40 and up, based on enrollment in calendar years for individuals in the same demographic stratum.<sup>b</sup>Rate per 100,000 age-adjusted to the 2005 US standard population (US Population Estimates from Current Population Survey).

SOURCE: Centers for Medicare and Medicaid Services, 5% Standard Analytical Claims Files.

**Table 2-29. Physician office visits by privately insured individuals for bladder stones listed as any diagnosis, rate<sup>a</sup>, age-adjusted rate<sup>b</sup>**

	2002 (N=872)		2003 (N=1,024)		2004 (N=1,020)		2005 (N=1,261)		2006 (N=1,178)	
	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate
Total	20.4	55.7	21.4	60.6	20.8	61.0	24.3	66.0	23.1	71.6
Age										
40-44	8.7*		8.0*		7.8*		8.3*		8.9*	
45-54	15.4*		18.5*		17.1*		15.9*		20.2*	
55-64	56.7*		59.3*		48.9*		55.4*		68.0*	
▶ 65-74	141.1		145.3		134.5		141.0		144.0	
75-84	170.4*		180.3*		243.6*		265.5*		260.3*	
85+	...		146.3*		108.0*		154.3*		211.5*	
Race/ethnicity										
▶ White	23.9	59.8	25.6	70.4	22.0	65.5	25.8	73.0	24.4	72.8
Black	20.0* <sup>†</sup>	46.1	27.2*	53.9	16.9*	47.3	12.6* <sup>†</sup>	30.8	16.1*	47.7
Hispanic	19.5*	61.3	24.9*	84.4	15.9*	50.8	11.6*	37.9	15.8*	56.5
Asian	18.9* <sup>†</sup>	69.5	14.1* <sup>†</sup>	74.0	19.3* <sup>†</sup>	65.4	19.0* <sup>†</sup>	65.5	23.4*	102.6
Other	14.1* <sup>†</sup>	69.0	13.0* <sup>†</sup>	143.2	22.8* <sup>†</sup>	98.0	16.7* <sup>†</sup>	82.7	30.7* <sup>†</sup>	101.9
Unknown	40.1*	...	27.7*	...	22.9*	...	18.3*	...	28.4*	...
Missing	16.3*	...	15.0*	...	18.9*	...	33.2*	...	20.5*	...
Region										
Northeast	42.2*	105.7	30.0*	81.1	36.2*	100.4	35.1*	94.6	33.5*	98.0
South	20.2*	55.8	21.5*	62.2	20.7*	61.7	22.7	68.0	21.0	65.5
▶ Midwest	15.3	41.3	18.4	50.2	17.3	46.3	21.9	54.6	22.0	70.1
West	16.2*	39.2	20.9*	63.0	16.7*	66.3	25.9*	69.0	24.0*	69.5

... Data unavailable.

▶ Denotes reference group.

\*Statistically different from reference group ( $p < .05$ ).

<sup>†</sup>Rate based on a count less than 30, should be interpreted with caution.

<sup>a</sup>Rate per 100,000 males aged 40 and up, based on enrollment in calendar years for individuals in the same demographic stratum.

<sup>b</sup>Rate per 100,000 age-adjusted to the 2005 US standard population (US Population Estimates from Current Population Survey).

SOURCE: i3 Claims Database, 2002-2006.

**Table 2-30. Emergency room visits by privately insured individuals for bladder stones listed as primary diagnosis, rate,<sup>a</sup> age-adjusted rate<sup>b</sup>**

	2002 (N=52)		2003 (N=64)		2004 (N=34)		2005 (N=22)		2006 (N=19)	
	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate
Total	1.2	2.5	1.3	2.7	0.7	1.8	0.4*	1.1	0.4*	0.8
Age										
40-44	2.7*		1.8**		0.9**		0.3**		0.2*	
45-54	1.7*		2.1**		0.8**		0.3**		0.5*	
55-64	3.0*		4.0*		1.0**		0.7**		1.4*	
▶ 65-74	4.2*		4.3*		5.1*		3.9*		0.6*	
75-84	1.0**		1.2**		4.7**		2.8**		1.8**	
Race/ethnicity										
▶ White	1.8*	3.1	1.5	3.2	0.5*	1.3	0.4*	1.4	0.1*	0.3
Black	3.5**	6.8	0.8**	3.7	2.2**	8.3	...	...	...	...
Hispanic	2.4**	22.0	1.1**	3.1	0.3**	1.5	0.2**	9.9	...	...
Asian	1.5**	11.5	...	...	0.7**	4.2	0.7**	7.1	0.6**	155.3
Unknown	...	...	1.3**	...	1.0**	...	0.3**	...	0.6**	...
Missing	0.7**	...	1.3**	...	1.4**	...	0.8**	...	2.0**	...
Region										
Northeast	0.9*	2.2	1.5*	3.2	...	...	0.2*	4.1	...	...
South	1.5*	3.2	1.3*	2.8	1.0*	3.1	0.5*	3.1	0.5*	1.0
▶ Midwest	1.3*	2.6	1.8*	3.7	0.9*	1.9	0.6*	1.3	0.5*	1.9
West	0.5**	1.2	0.3**	1.4	...	...	0.1**	1.1	...	...

... Data unavailable.

▶ Denotes reference group.

\*Statistically different from reference group ( $p < .05$ ).

\*\*Rate based on a count less than 30, should be interpreted with caution.

<sup>a</sup>Rate per 100,000 males aged 40 and up, based on enrollment in calendar years for individuals in the same demographic stratum.

<sup>b</sup>Rate per 100,000 age-adjusted to the 2005 US standard population (US Population Estimates from Current Population Survey).

SOURCE: i3 Claims Database, 2002-2006.