

## **CHAPTER 13**

# **Pediatric Urologic Diseases**

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**Urinary Incontinence**  
**Hypospadias**  
**Ureterocele**  
**Ureteropelvic Junction Obstruction**  
**Posterior Urethral Valves**  
**Vesicoureteral Reflux Disease**  
**Upper Urinary Tract Stones**  
**Lower Urinary Tract Stones**  
**Testicular Cancer**  
**Urinary Tract Infection**  
**Undescended Testes**

**Table 13-1. Codes used in the diagnosis and management of pediatric urologic diseases****Pediatric Incontinence***Individuals under 18 with one of the following ICD-9 diagnosis codes, but not a coexisting 952.XX or 953.XX code:*

307.6	Enuresis
596.51	Hypertonicity of bladder
596.52	Low bladder compliance
596.59	Other functional disorder of bladder
596.8	Other specified disorders of bladder
599.8	Other specified disorders of urethra and urinary tract
599.81	Urethral hypermobility
599.82	Intrinsic (urethral) sphincter deficiency (ISD)
599.83	Urethral instability
599.84	Other specified disorders of urethra
625.6	Stress incontinence, female
788.3	Urinary incontinence
788.30	Urinary incontinence unspecified
788.31	Urge incontinence
788.32	Stress incontinence, male
788.33	Mixed incontinence, male and female
788.34	Incontinence without sensory awareness
788.36	Nocturnal enuresis
788.37	Continuous leakage
788.39	Other urinary incontinence

**Pediatric Urinary Tract Infection***Individuals under 18 with one of the following ICD-9 diagnosis codes:*

Cystitis	
112.2	Candidiasis of other urogenital sites
595.0	Acute cystitis
595.2	Other chronic cystitis
595.3	Trigonitis
595.89	Other specified types of cystitis
595.9	Cystitis, unspecified
Pyelonephritis	
590.0	Chronic pyelonephritis
590.00	Chronic pyelonephritis without lesion of renal medullary necrosis
590.01	Chronic pyelonephritis with lesion of renal medullary necrosis
590.1	Acute pyelonephritis
590.10	Acute pyelonephritis without lesion of renal medullary necrosis
590.11	Acute pyelonephritis with lesion of renal medullary necrosis
590.2	Renal and perinephric abscess
590.3	Pyeloureteritis cystica
590.8	Other pyelonephritis or pyonephrosis, not specified as acute or chronic
590.9	Infection of kidney, unspecified
593.89	Other specified disorders of kidney and ureter
Orchitis	
016.5	Tuberculosis of other male genital organs
072.0	Mumps orchitis
603.1	Infected hydrocele
604.0	Orchitis, epididymitis and epididymo-orchitis with abscess
604.9	Other orchitis, epididymitis, and epididymo-orchitis, without mention of abscess

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**Table 13-1 (continued). Codes used in the diagnosis and management of pediatric urologic diseases**

604.90	Orchitis and epididymitis, unspecified
604.91	Orchitis and epididymitis in diseases classified elsewhere
604.99	Other orchitis, epididymitis, and epididymo-orchitis, without abscess
Other	
599.0	Urinary tract infection site not specified
760.1	Maternal renal and urinary tract diseases affecting fetus or newborn
771.82	Urinary tract infection of newborn

**Pediatric Hypospadias****Males under 18 with one or more of the following:***ICD-9 diagnosis codes*

752.6	Hypospadias and epispadias and other penile anomalies
752.61	Hypospadias

*ICD-9 procedure codes*

58.45	Repair of hypospadias and epispadias
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*CPT procedure codes*

54300	Plastic operation on penis for straightening of chordee (eg, hypospadias), with or without mobilization of urethra
54304	Plastic operation on penis for correction of chordee or for first stage hypospadias repair with or without transplantation of prepuce and/or skin flaps
54308	Urethroplasty for second stage hypospadias repair (including urinary diversion); less than 3 cm
54312	Urethroplasty for second stage hypospadias repair (including urinary diversion); greater than 3 cm
54316	Urethroplasty for second stage hypospadias repair (including urinary diversion) with free skin graft obtained from site other than genitalia
54318	Urethroplasty for third stage hypospadias repair to release penis from scrotum (eg, third stage Cecil repair)
54322	One stage distal hypospadias repair (with or without chordee or circumcision); with simple meatal advancement (eg, Magpi, V-flap)
54324	One stage distal hypospadias repair (with or without chordee or circumcision); with urethroplasty by local skin flaps (eg, flip-flap, prepuce flap)
54326	One stage distal hypospadias repair (with or without chordee or circumcision); with urethroplasty by local skin flaps and mobilization of urethra
54328	One stage distal hypospadias repair (with or without chordee or circumcision); with extensive dissection to correct chordee and urethroplasty with local skin flaps, skin graft patch, and/or island flap
54332	One stage proximal penile or penoscrotal hypospadias repair requiring extensive dissection to correct chordee and urethroplasty by use of skin graft tube and/or island flap
54336	One stage perineal hypospadias repair requiring extensive dissection to correct chordee and urethroplasty by use of skin graft tube and/or island flap
54340	Repair of hypospadias complications (ie, fistula, stricture, diverticula); by closure, incision, or excision, simple
54344	Repair of hypospadias complications (ie, fistula, stricture, diverticula); requiring mobilization of skin flaps and urethroplasty with flap or patch graft
54348	Repair of hypospadias complications (ie, fistula, stricture, diverticula); requiring extensive dissection and urethroplasty with, flap, patch or tubed graft (includes urinary diversion)
54352	Repair of hypospadias cripple requiring extensive dissection and excision of previously constructed structures including re-release of chordee and reconstruction of urethra and penis by use of local skin as grafts and island flaps and skin brought in as flaps or grafts
54360	Plastic operation on penis to correct angulation

**Pediatric Testicular Cancer****Males under 18 with one or more of the following:***ICD-9 diagnosis codes*

186	Malignant neoplasm of testis
186.0	Malignant neoplasm of undescended testis
186.9	Malignant neoplasm of other and unspecified testis

*CPT procedure codes*

38564	Limited lymphadenectomy for staging (separate procedure); retroperitoneal (aortic and/or splenic)
38780	Retroperitoneal transabdominal lymphadenectomy, extensive, including pelvic, aortic, and renal nodes (separate procedure)

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**Table 13-1 (continued). Codes used in the diagnosis and management of pediatric urologic diseases**

54530	Orchiectomy, radical, for tumor; inguinal approach
54535	Orchiectomy, radical, for tumor; with abdominal exploration

**Pediatric Undescended Testes****Males under 18 with one or more of the following:***ICD-9 diagnosis codes*

752.5	Undescended and retractile testis
752.51	Undescended testis
752.52	Retractile testis

*ICD-9 procedure codes*

62.5 <sup>a</sup>	Orchiopexy
63.53 <sup>a</sup>	Transplantation of spermatic cord

*CPT procedure codes*

54550	Exploration for undescended testis (inguinal or scrotal area)
54560	Exploration for undescended testis with abdominal exploration
54640	Orchiopexy, inguinal approach, with or without hernia repair
54650	Orchiopexy, abdominal approach, for intra-abdominal testis (eg, Fowler-Stephens)
54690	Laparoscopy, surgical; orchiectomy
54692	Laparoscopy, surgical; orchiopexy for intra-abdominal testis
54699	Unlisted laparoscopy procedure, testis

**Pediatric Vesicoureteral Reflux****Individuals under 18 with one or more of the following:***ICD-9 diagnosis codes*

593.7	Vesicoureteral reflux
593.70	Vesicoureteral reflux, unspecified or without reflux nephropathy
593.71	Vesicoureteral reflux with reflux nephropathy, unilateral
593.72	Vesicoureteral reflux with reflux nephropathy, bilateral
593.73	Other vesicoureteral reflux with reflux nephropathy NOS

*CPT procedure codes*

50660	Ureterectomy, total, ectopic ureter, combination abdominal, vaginal and/or perineal approach
50780	Ureteroneocystostomy; anastomosis of single ureter to bladder
50781	Ureteroneocystostomy
50782	Ureteroneocystostomy; anastomosis of duplicated ureter to bladder
50783	Ureteroneocystostomy; with extensive ureteral tailoring
50785	Ureteroneocystostomy; with vesico-psoas hitch or bladder flap
50947	Laparoscopy, surgical; ureteroneocystostomy with cystoscopy and ureteral stent placement
50948	Laparoscopy, surgical; ureteroneocystostomy without cystoscopy and ureteral stent placement
52327	Cystourethroscopy (including ureteral catheterization); with subureteric injection of implant material

**Pediatric Posterior Urethral Valves****Males under 18 with one or more of the following:***ICD-9 diagnosis codes*

753.6	Congenital atresia and stenosis of urethra and bladder neck
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*CPT procedure codes*

52340	Cystourethroscopy with incision, fulguration, or resection of congenital posterior urethral valves, or congenital obstructive hypertrophic mucosal folds
52400	Cystourethroscopy with incision, fulguration, or resection of congenital posterior urethral valves, or congenital obstructive hypertrophic mucosal folds

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**Table 13-1 (continued). Codes used in the diagnosis and management of pediatric urologic diseases****Pediatric Ureterocele****Individuals under 18 with one or more of the following:***ICD-9 diagnosis codes*

- 593.89 Other specified disorders of kidney and ureter  
 753.23 Congenital ureterocele

*CPT procedure codes*

- 50660 Ureterectomy, total, ectopic ureter, combination abdominal, vaginal and/or perineal approach  
 51535 Cystotomy for excision, incision, or repair of ureterocele  
 52300 Cystourethroscopy; with resection or fulguration of orthotopic ureterocele(s), unilateral or bilateral  
 52301 Cystourethroscopy; with resection or fulguration of ectopic ureterocele(s), unilateral or bilateral

**Pediatric Ureteropelvic Junction Obstruction****Individuals under 18 with one or more of the following:***ICD-9 diagnosis codes*

- 753.2 Obstructive defects of renal pelvis and ureter  
 753.20 Unspecified obstructive defect of renal pelvis and ureter  
 753.21 Congenital obstruction of ureteropelvic junction

*CPT procedure codes*

- 50400 Pyeloplasty (Foley Y-pyeloplasty), plastic operation on renal pelvis, with or without plastic operation on ureter, nephropexy, nephrostomy, pyelostomy, or ureteral splinting; simple  
 50405 Pyeloplasty (Foley Y-pyeloplasty), plastic operation on renal pelvis, with or without plastic operation on ureter, nephropexy, nephrostomy, pyelostomy, or ureteral splinting; complicated (congenital kidney abnormality, secondary pyeloplasty, solitary kidney, calyco-plasty)  
 50540 Symphysiotomy for horseshoe kidney with or without pyeloplasty and/or other plastic procedure, unilateral or bilateral (1 operation)  
 50544 Laparoscopy, surgical; pyeloplasty  
 50575 Renal endoscopy through nephrotomy or pyelotomy, with or without irrigation, instillation, or ureteropyelography, exclusive of radiologic service; with endopyelotomy (includes cystoscopy, ureteroscopy, dilation of ureter and ureteral pelvic junction, incision of ureteral pelvic junction and insertion of endopyelotomy stent)  
 50740 Ureteropyelostomy, anastomosis of ureter and renal pelvis  
 50750 Ureterocalycostomy, anastomosis of ureter and renal calyx  
 52342 Cystourethroscopy; with treatment of ureteropelvic junction stricture (eg, balloon dilation, laser, electrocautery, and incision)  
 52346 Cystourethroscopy with ureteroscopy; with treatment of intra-renal stricture (eg, balloon dilation, laser, electrocautery, and incision)

**Pediatric Upper Tract Kidney Stones****Individuals under 18 with one of the following ICD-9 diagnosis codes:**

- 270.0 Disturbances of amino-acid transport  
 274.11 Uric acid nephrolithiasis  
 592.0 Calculus of kidney  
 592.1 Calculus of ureter  
 592.9 Urinary calculus, unspecified

**Individuals under 18 with the following ICD-9 diagnosis code and any one of the following procedure codes, or the procedure code alone:**

- 271.8 Other specified disorders of carbohydrate transport and metabolism  
 and

*ICD-9 procedure codes*

- 55.03 Percutaneous nephrostomy without fragmentation  
 55.04 Percutaneous nephrostomy with fragmentation  
 55.92 Percutaneous aspiration of kidney (pelvis)  
 56.0 Transurethral removal of obstruction from ureter and renal pelvis  
 56.2 Ureterotomy  
 59.8 Ureteral catheterization  
 59.95 Ultrasonic fragmentation of urinary stones  
 98.51 Extracorporeal shockwave lithotripsy (ESWL) of the kidney, ureter and/or bladder

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**Table 13-1 (continued). Codes used in the diagnosis and management of pediatric urologic diseases**

<i>CPT procedure codes</i>	
50060	Nephrolithotomy; removal of calculus
50065	Nephrolithotomy; secondary surgical operation for calculus
50070	Nephrolithotomy; complicated by congenital kidney abnormality
50075	Nephrolithotomy; removal of large staghorn calculus filling renal pelvis and calyces (including anatomic pyelolithotomy)
50080	Percutaneous nephrostolithotomy or pyelostolithotomy, with or without dilation, endoscopy, lithotripsy, stenting, or basket extraction; up to 2 cm
50081	Percutaneous nephrostolithotomy or pyelostolithotomy, with or without dilation, endoscopy, lithotripsy, stenting, or basket extraction; over 2 cm
50130	Pyelotomy; with removal of calculus (pyelolithotomy, pelviolithotomy, including coagulum pyelolithotomy)
50135	Pyelotomy; complicated (eg, secondary operation, congenital kidney abnormality)
50561	Renal endoscopy through established nephrostomy or pyelostomy, with or without irrigation, instillation, or ureteropyelography, exclusive of radiologic service; with removal of foreign body or calculus
50580	Renal endoscopy through nephrotomy or pyelotomy, with or without irrigation, instillation, or ureteropyelography, exclusive of radiologic service; with removal of foreign body or calculus
50590	Lithotripsy, extracorporeal shock wave
50610	Ureterolithotomy, upper one-third of ureter
50620	Ureterolithotomy, middle one-third of ureter
50630	Ureterolithotomy, lower one-third of ureter
50945	Laparoscopy, surgical; ureterolithotomy
50961	Ureteral endoscopy through established ureterostomy, with or without irrigation, instillation, or ureteropyelography, exclusive of radiologic service; with removal of foreign body or calculus
50980	Ureteral endoscopy through ureterotomy, with or without irrigation, instillation, or ureteropyelography, exclusive of radiologic service; with removal of foreign body or calculus
51060	Transvesical ureterolithotomy
51065	Cystotomy, with calculus basket extraction and/or ultrasonic or electrohydraulic fragmentation of ureteral calculus
52320	Cystourethroscopy (including ureteral catheterization); with removal of ureteral calculus
52325	Cystourethroscopy (including ureteral catheterization); with fragmentation of ureteral calculus (eg, ultrasonic or electro-hydraulic technique)
52330	Cystourethroscopy (including ureteral catheterization); with manipulation, without removal of ureteral calculus
52351	Cystourethroscopy, with ureteroscopy and/or pyeloscopy; diagnostic
52352	Cystourethroscopy, with ureteroscopy and/or pyeloscopy; with removal or manipulation of calculus (ureteral catheterization is included)
52353	Cystourethroscopy, with ureteroscopy and/or pyeloscopy; with lithotripsy (ureteral catheterization is included)
<b>Pediatric Lower Tract Kidney Stones</b>	
<b>Individuals under 18 with one of the following ICD-9 diagnosis codes:</b>	
594.0	Calculus in diverticulum of bladder
594.1	Other calculus in bladder
594.2	Calculus in urethra
594.8	Other lower urinary tract calculus
594.9	Calculus of lower urinary tract, unspecified

<sup>a</sup>Must occur with diagnosis of 550.XX or 752.XX.

**Table 13-2. Nationally representative inpatient stays for pediatric<sup>a</sup> urinary incontinence listed as primary diagnosis, rate,<sup>b</sup> age-adjusted rate<sup>c</sup>**

	2003 (N=231)		2006 (N=184)	
	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate
Total	0.3	0.3	0.2	0.2
Age				
0-2	†		†	
3-10	0.3		0.3	
▶ 11-17	0.3		0.3	
Race/ethnicity				
▶ White	0.2	0.2	0.2	0.2
Black	†	0.2	†	0.3
Hispanic	0.3*	0.3	†	0.1
Asian	†	0.2	...	...
Other	†	0.5	†	0.5
Missing	...	...	...	...
Region				
Northeast	†	0.2	†	0.2
South	0.2	0.2	0.2	0.2
▶ Midwest	0.3	0.3	0.3	0.3
West	0.3*	0.3	†	0.1
Missing	...	...	...	...
Gender				
Female	0.3	0.3	0.2	0.2
▶ Male	0.3	0.3	0.3	0.3

... Data unavailable.

▶ Denotes reference group.

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

† Figure does not meet standard for reliability or precision.

<sup>a</sup>Individuals under 18.

<sup>b</sup>Rate per 100,000 individuals in the same demographic stratum is based on 2003 & 2006 population estimates from Current Population Survey (CPS).

<sup>c</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 (HCUP), Kids' Inpatient Database, 2003 & 2006.

**Table 13-3. Nationally representative inpatient stays for pediatric<sup>a</sup> hypospadias listed as primary diagnosis, rate,<sup>b</sup> age-adjusted rate<sup>c</sup>**

	2003 (N=1,073)		2006 (N=875)	
	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate
Total	2.9	3.0	2.3	2.3
Age				
0-2	12.9		9.8	
3-10	1.4		1.0	
▶ 11-17	0.6		0.6	
Race/ethnicity				
▶ White	2.0	2.1	1.5	1.4
Black	1.9*	2.0	1.9*	1.9
Hispanic	2.4*	2.5	2.0*	2.0
Asian	3.4*	3.8	2.9*	2.8
Other	6.1*	6.2	5.3*	5.2
Missing	...	...	...	...
Region				
Northeast	3.9	4.3	3.4	3.5
South	1.3	1.3	1.0	1.0
▶ Midwest	1.0	1.0	0.9	0.9
West	3.2*	3.2	2.6*	2.6
Missing	...	...	...	...

... Data unavailable.

▶ Denotes reference group.

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

<sup>a</sup>Individuals under 18.

<sup>b</sup>Rate per 100,000 individuals in the same demographic stratum is based on 2003 & 2006 population estimates from Current Population Survey (CPS).

<sup>c</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 (HCUP), Kids' Inpatient Database, 2003 & 2006.

**Table 13-4. Nationally representative inpatient stays for pediatric<sup>a</sup> ureterocele listed as primary diagnosis, rate,<sup>b</sup> age-adjusted rate<sup>c</sup>**

	2003 (N=645)		2006 (N=597)	
	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate
Total	0.9	0.9	0.8	0.8
Age				
0-2	3.6		3.3	
3-10	0.4		0.4	
▶ 11-17	0.3		0.2	
Race/ethnicity				
▶ White	0.8	0.8	0.6	0.6
Black	†	0.2	0.4*	0.4
Hispanic	0.7*	0.8	0.8*	0.8
Asian	†	1.0	†	0.4
Other	†	1.5	1.8*	1.8
Missing	...	...	...	...
Region				
Northeast	0.7	0.7	0.8	0.8
South	0.7	0.7	0.6	0.6
▶ Midwest	0.7	0.7	0.5	0.5
West	0.7*	0.7	0.5*	0.5
Missing	...	...	...	...
Gender				
Female	1.2	1.2	1.0	1.0
▶ Male	0.6	0.6	0.6	0.6

... Data unavailable.

▶ Denotes reference group.

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

† Figure does not meet standard for reliability or precision.

<sup>a</sup>Individuals under 18.<sup>b</sup>Rate per 100,000 individuals in the same demographic stratum is based on 2003 & 2006 population estimates from Current Population Survey (CPS).<sup>c</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 (HCUP), Kids' Inpatient Database, 2003 &amp; 2006.

**Table 13-5. Nationally representative inpatient stays for pediatric<sup>a</sup> ureteropelvic junction obstruction listed as primary diagnosis, rate,<sup>b</sup> age-adjusted rate<sup>c</sup>**

	2003 (N=1,746)		2006 (N=1,306)	
	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate
Total	2.4	2.4	1.8	1.8
Age				
0-2	9.0		6.8	
3-10	1.4		0.9	
▶ 11-17	0.9		0.6	
Race/ethnicity				
▶ White	1.9	1.9	1.6	1.6
Black	1.0*	1.0	0.8*	0.8
Hispanic	1.7*	1.8	1.1*	1.1
Asian	1.5*	1.6	†	0.9
Other	3.8*	3.8	2.8*	2.8
Missing	...	...	...	...
Region				
Northeast	2.2	2.2	1.6	1.6
South	1.6	1.6	1.2	1.2
▶ Midwest	2.3	2.4	1.5	1.5
West	1.8*	1.9	1.5*	1.5
Missing	...	...	...	...
Gender				
Female	1.4	1.5	1.0	1.0
▶ Male	3.3	3.4	2.5	2.5

... Data unavailable.

▶ Denotes reference group.

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

† Figure does not meet standard for reliability or precision.

<sup>a</sup>Individuals under 18.<sup>b</sup>Rate per 100,000 individuals in the same demographic stratum is based on 2003 & 2006 population estimates from Current Population Survey (CPS).<sup>c</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 (HCUP), Kids' Inpatient Database, 2003 &amp; 2006.



**Table 13-6. Nationally representative inpatient stays for pediatric<sup>a</sup> posterior urethral valves listed as primary diagnosis, rate,<sup>b</sup> age-adjusted rate<sup>c</sup>**

	2003 (N=248)		2006 (N=254)	
	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate
Total	0.3	0.3	0.3	0.3
Age				
0-2	1.7		1.5	
3-10	0.1		0.1	
▶ 11-17	†		†	
Race/ethnicity				
▶ White	0.2	0.2	0.2	0.2
Black	0.5*	0.5	0.3*	0.3
Hispanic	0.2*	0.4	0.2*	0.2
Asian	†	0.9	†	0.3
Other	†	1.3	†	1.2
Missing	...	...	...	...
Region				
Northeast	0.3	0.5	0.3	0.3
South	0.3	0.3	0.2	0.2
▶ Midwest	0.2	0.3	0.2	0.4
West	0.2*	0.2	0.3*	0.3
Missing	...	...	...	...

... Data unavailable.

▶ Denotes reference group.

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

† Figure does not meet standard for reliability or precision.

<sup>a</sup>Individuals under 18.

<sup>b</sup>Rate per 100,000 individuals in the same demographic stratum is based on 2003 & 2006 population estimates from Current Population Survey (CPS).

<sup>c</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 (HCUP), Kids' Inpatient Database, 2003 & 2006.

**Table 13-7. Nationally representative inpatient stays for pediatric<sup>a</sup> vesicoureteral reflux listed as primary diagnosis, rate,<sup>b</sup> age-adjusted rate<sup>c</sup>**

	2003 (N=7,458)		2006 (N=5,908)	
	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate
Total	10.2	10.2	8.0	8.0
Age				
0-2	22.0*		18.8*	
3-10	13.5		10.1	
▶ 11-17	2.0		1.3	
Race/ethnicity				
▶ White	8.6	8.6	7.6	7.6
Black	1.4*	1.4	1.1*	1.1
Hispanic	6.5*	6.7	4.4*	4.4
Asian	2.6*	2.7	3.5*	3.5
Other	12.4*	12.3	12.3*	12.4
Missing	...	...	...	...
Region				
Northeast	8.8	8.7	7.8	7.8
South	7.2	7.3	5.8	5.7
▶ Midwest	7.6	7.5	6.4	6.4
West	8.1*	8.1	5.8*	5.8
Missing	...	...	...	...
Gender				
Female	15.2	15.2	11.7	11.6
▶ Male	5.4	5.5	4.5	4.5

... Data unavailable.

▶ Denotes reference group.

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

<sup>a</sup>Individuals under 18.

<sup>b</sup>Rate per 100,000 individuals in the same demographic stratum is based on 2003 & 2006 population estimates from Current Population Survey (CPS).

<sup>c</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 (HCUP), Kids' Inpatient Database, 2003 & 2006.

**Table 13-8. Nationally representative inpatient stays for pediatric<sup>a</sup> upper urinary tract stones listed as primary diagnosis, rate,<sup>b</sup> age-adjusted rate<sup>c</sup>**

	2003 (N=6,503)		2006 (N=6,772)	
	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate
Total	8.9	8.9	9.2	9.2
Age				
0-2	11.6		12.4	
3-10	5.1		5.7	
▶ 11-17	11.9		11.5	
Race/ethnicity				
▶ White	7.3	7.3	8.2	8.2
Black	2.8*	2.9	3.1*	3.1
Hispanic	5.4*	5.5	5.1*	5.1
Asian	2.5*	2.5	3.1*	3.1
Other	11.3*	11.3	10.0*	9.9
Unknown	†	...	†	...
Missing	...	...	...	...
Region				
Northeast	7.0	7.1	8.0	8.0
South	7.1	7.1	7.1	7.1
▶ Midwest	8.1	8.2	8.3	8.3
West	5.6*	5.7	5.4*	5.4
Missing	...	...	...	...
Gender				
Female	9.6	9.6	10.0	10.0
▶ Male	8.2	8.2	8.3	8.3

... Data unavailable.

▶ Denotes reference group.

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

† Figure does not meet standard for reliability or precision.

<sup>a</sup>Individuals under 18.<sup>b</sup>Rate per 100,000 individuals in the same demographic stratum is based on 2003 & 2006 population estimates from Current Population Survey (CPS).<sup>c</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 (HCUP), Kids' Inpatient Database, 2003 &amp; 2006.

**Table 13-9. Nationally representative inpatient stays for pediatric<sup>a</sup> lower urinary tract stones listed as primary diagnosis, rate,<sup>b</sup> age-adjusted rate<sup>c</sup>**

	2003 (N=145)		2006 (N=150)	
	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate
Total	0.2	0.2	0.2	0.2
Age				
0-2	†		†	
3-10	0.2		0.2	
▶ 11-17	0.3		0.3	
Race/ethnicity				
▶ White	0.2	0.2	0.2	0.2
Black	†	0.1	†	0.1
Hispanic	0.2*	0.3	†	0.2
Asian	†	0.3	†	0.1
Other	†	0.2	†	0.5
Missing	...	...	†	...
Region				
Northeast	†	0.2	0.3	0.3
South	0.1	0.2	0.2	0.2
▶ Midwest	†	0.2	†	0.1
West	0.2*	0.2	0.2*	0.2
Missing	†	...	...	...
Gender				
Female	0.2	0.2	0.2	0.2
▶ Male	0.2	0.2	0.2	0.2

... Data unavailable.

▶ Denotes reference group.

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

† Figure does not meet standard for reliability or precision.

<sup>a</sup>Individuals under 18.<sup>b</sup>Rate per 100,000 individuals in the same demographic stratum is based on 2003 & 2006 population estimates from Current Population Survey (CPS).<sup>c</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 (HCUP), Kids' Inpatient Database, 2003 &amp; 2006.

**Table 13-10. Nationally representative inpatient stays for pediatric<sup>a</sup> testicular cancer listed as primary diagnosis, rate,<sup>b</sup> age-adjusted rate<sup>c</sup>**

	2003 (N=159)		2006 (N=122)	
	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate
Total	0.4	0.4	0.3	0.3
Age				
0-2	†		†	
3-10	†		†	
▶ 11-17	0.9		0.7	
Race/ethnicity				
▶ White	0.3	0.6	0.2	0.2
Black	†	0.3	†	0.1
Hispanic	0.5*	0.5	0.5*	0.8
Asian	†	0.5	†	0.4
Other	†	0.5	†	1.6
Missing	...	...	†	...
Region				
Northeast	†	0.4	†	0.3
South	0.4	0.4	0.3	0.3
▶ Midwest	†	0.3	†	0.3
West	0.4*	0.4	0.3*	0.4
Missing	...	...	†	...

... Data unavailable.

▶ Denotes reference group.

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

† Figure does not meet standard for reliability or precision.

<sup>a</sup>Individuals under 18.

<sup>b</sup>Rate per 100,000 individuals in the same demographic stratum is based on 2003 & 2006 population estimates from Current Population Survey (CPS).

<sup>c</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 (HCUP), Kids' Inpatient Database, 2003 & 2006.

**Table 13-11. Nationally representative inpatient stays for pediatric<sup>a</sup> urinary tract infection listed as primary diagnosis, rate,<sup>b</sup> age-adjusted rate<sup>c</sup>**

	2003 (N=40,984)		2006 (N=38,372)	
	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate
Total	55.9	57.4	51.9	51.7
Age				
0-2	222.9*		201.6*	
3-10	26.0		23.1	
▶ 11-17	23.3		21.0	
Race/ethnicity				
▶ White	31.0	31.4	30.8	30.6
Black	33.2*	34.2	31.7*	31.9
Hispanic	81.1*	84.9	70.2*	70.3
Asian	36.5*	41.0	33.7*	34.1
Other	94.2*	94.6	74.6*	73.2
Unknown	†	...	†	...
Missing	...	...	...	...
Region				
Northeast	47.3	48.5	48.8	48.7
South	54.1	54.7	47.0	46.4
▶ Midwest	37.4	38.4	35.6	35.7
West	38.1*	39.7	34.6*	34.8
Missing	...	...	...	...
Gender				
Female	75.1*	76.4	69.8*	69.6
▶ Male	37.5	39.1	34.8	34.6

... Data unavailable.

▶ Denotes reference group.

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

† Figure does not meet standard for reliability or precision.

<sup>a</sup>Individuals under 18.

<sup>b</sup>Rate per 100,000 individuals in the same demographic stratum is based on 2003 & 2006 population estimates from Current Population Survey (CPS).

<sup>c</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 (HCUP), Kids' Inpatient Database, 2003 & 2006.

**Table 13-12. Nationally representative inpatient stays for pediatric<sup>a</sup> orchitis, count, rate<sup>b</sup>**

Year	Count	Rate
2003	567	1.5
2006	556	1.5

<sup>a</sup>Individuals under 18.

<sup>b</sup>Rate per 100,000 based on 2002-2007 population estimates from the Public Use Microdata Sample (PUMS) files from the American Community Survey, for relevant demographic categories of US male civilian non-institutionalized population under age 18.

SOURCE: Healthcare Cost and Utilization Project (HCUP), Kids' Inpatient Database, 2003 & 2006.

**Table 13-13. Nationally representative inpatient stays for pediatric<sup>a</sup> undescended testes listed as primary diagnosis, rate,<sup>b</sup> age-adjusted rate<sup>c</sup>**

	2003 (N=1,158)		2006 (N=1,042)	
	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate
Total	3.1	3.2	2.8	2.7
Age				
0-2	12.9		12.0	
3-10	1.6		1.1	
► 11-17	0.9		0.7	
Race/ethnicity				
► White	2.0	2.0	1.9	1.9
Black	2.4*	2.5	2.5*	2.6
Hispanic	2.4*	2.5	2.1*	2.1
Asian	2.7*	2.9	2.8*	2.8
Other	6.3*	6.5	4.2*	4.1
Missing	...	...	...	...
Region				
Northeast	3.3	3.5	2.9	2.9
South	1.6	1.6	1.6	1.6
► Midwest	2.6	2.7	2.2	2.2
West	2.9*	3.0	2.6*	2.6
Missing	...	...	...	...

... Data unavailable.

► Denotes reference group.

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

<sup>a</sup>Individuals under 18.

<sup>b</sup>Rate per 100,000 individuals in the same demographic stratum is based on 2003 & 2006 population estimates from Current Population Survey (CPS).

<sup>c</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 (HCUP), Kids' Inpatient Database, 2003 & 2006.

**Table 13-14. Inpatient stays by privately insured individuals for undescended testes listed as primary diagnosis, rate,<sup>a</sup> age-adjusted rate<sup>b</sup>**

	2002 (N=133)		2003 (N=136)		2004 (N=125)		2005 (N=160)		2006 (N=136)	
	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate
Total	7.7	7.7	7.2	7.4	6.7	6.8	8.6	8.7	7.3	7.3
Age										
▶ 0-2	28.3		23.5		22.6		31.9		27.1	
3-10	3.5**		3.0**		2.9**		2.7**		2.9**	
11-17	3.7**		5.5*		4.5*		5.6*		4.0**	
Race/ethnicity										
▶ White	6.4	6.6	8.1	8.2	7.1	7.2	9.7	9.7	8.1	8.1
Black	8.4**	14.7	12.1**	13.1	3.4**	6.1	8.9**	17.4	12.3**	22.7
Hispanic	5.0**	3.9	9.4**	9.7	8.4**	8.7	7.6**	7.8	5.0**	5.1
Asian	3.6**	16.9	7.6**	13.1	...	...	14.5**	12.9	5.2**	9.0
Other	26.4**	25.5	...	...	9.2**	17.7	...	...	4.4**	24.5
Unknown	13.8**	...	5.7**	...	7.7**	...	6.7**	...	6.7**	...
Missing	8.1*	...	5.7*	...	5.9**	...	4.7**	...	5.4**	...
Region										
Northeast	18.2*	17.7	10.2*	10.2	11.3**	11.4	11.9*	12.2	9.8*	9.8
South	5.7	6.0	7.0	7.3	5.6	5.8	8.0	8.2	6.7	6.8
▶ Midwest	6.3	6.3	6.9	6.9	5.7	5.7	8.5	8.5	6.4	6.4
West	9.2**	8.7	6.5**	6.2	9.3**	9.2	8.2**	8.0	9.5**	9.5

... 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 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 13-15. Hospital outpatient visits by privately insured individuals for undescended testes listed as primary diagnosis, rate,<sup>a</sup> age-adjusted rate<sup>b</sup>**

	2002 (N=1,823)		2003 (N=1,746)		2004 (N=1,617)		2005 (N=1,758)		2006 (N=1,596)	
	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate
Total	105.0	103.9	93.0	93.1	86.8	86.8	94.3	94.1	86.0	85.1
Age										
▶ 0-2	299.5		270.6		238.5		264.0		229.7	
3-10	88.8*		75.9*		76.2*		82.6*		82.3*	
11-17	40.7*		39.3*		36.5*		37.5*		29.6*	
Race/ethnicity										
▶ White	117.5	117.4	100.6	100.7	92.0	91.4	98.3	97.4	86.5	85.3
Black	98.6*	110.8	75.9*	81.9	56.4*	58.0	70.2*	73.5	63.0*	65.2
Hispanic	99.2*	102.2	122.6*	128.4	73.1*	75.4	93.0*	97.3	86.8*	89.2
Asian	124.5*	114.8	96.8*	90.4	86.9*	78.9	97.8*	89.4	64.7*	58.9
Other	167.0*♦	148.6	126.3*♦	119.7	115.4*♦	111.6	99.1*♦	96.3	93.4*♦	92.1
Unknown	112.0*	...	95.1*	...	88.8*	...	81.6*	...	104.0*	...
Missing	95.1*	...	79.5*	...	81.1*	...	89.9*	...	85.3*	...
Region										
Northeast	105.6*	101.4	89.9*	88.1	85.7	84.1	97.4	95.7	95.1	93.8
South	84.4*	86.2	84.2*	86.8	74.9*	77.0	82.4*	84.2	75.5*	76.3
▶ Midwest	124.8	123.5	105.5	104.6	97.2	96.1	109.1	108.4	101.9	100.6
West	114.0*	107.1	89.4*	86.3	99.7*	96.3	92.0*	88.5	75.6*	72.5

... 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 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 13-16. Nationally representative hospital outpatient visits for undescended testes listed as primary diagnosis, 2002-2007 (merged), 6-year count**

	6-Year Count
Total	132,730
Age	
0-2	68,330
3-10	63,399
11-17	1,001
Race/ethnicity	
White	91,809
Black	30,136
Hispanic	8,793
Other	1,992
Region	
Northeast	25,199
South	94,926
Midwest	5,784
West	6,821

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

**Table 13-17. Ambulatory surgery center visits by privately insured individuals for undescended testes listed as primary diagnosis, rate,<sup>a</sup> age-adjusted rate<sup>b</sup>**

	2002 (N=245)		2003 (N=272)		2004 (N=313)		2005 (N=313)		2006 (N=290)	
	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate
Total	14.1	14.0	14.5	14.4	16.8	16.8	16.8	16.7	15.6	15.5
Age										
▶ 0-2	43.4		43.3		49.9		48.4		44.0	
3-10	11.7*		14.1*		13.5*		15.3*		14.4*	
11-17	4.6*		3.0**		7.0*		5.4*		5.1*	
Race/ethnicity										
▶ White	17.6	17.8	16.9	16.7	17.9	17.8	18.1	17.9	15.6	15.4
Black	...	...	9.1**	16.3	11.3**	11.6	10.2**	11.1	15.1**	15.7
Hispanic	6.3**	6.3	9.4**	9.7	15.6**	16.3	12.2**	12.8	8.4**	8.6
Asian	14.2**	20.1	17.8**	25.2	22.7**	20.9	16.3**	14.9	14.0**	19.5
Other	61.5**	89.9	25.3**	36.9	13.9**	17.6	4.5**	9.4	17.8**	17.4
Unknown	24.6**	...	15.8**	...	15.4**	...	16.6**	...	19.1**	...
Missing	11.8*	...	12.5*	...	14.7*	...	17.4*	...	19.0*	...
Region										
Northeast	20.5*	20.0	26.7*	25.9	23.2	22.6	27.3*	26.7	26.7*	26.4
South	8.6*	8.8	7.9*	8.1	10.8*	11.2	12.2*	12.4	10.2*	10.3
▶ Midwest	13.4	13.2	16.9	16.6	20.3	20.1	17.7	17.6	19.5	19.3
West	29.1*	27.3	18.6*	17.8	22.1*	21.1	20.2*	19.3	15.0*	14.4

... 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 13-18. Physician office visits by privately insured individuals for undescended testes listed as any diagnosis, rate,<sup>a</sup> age-adjusted rate<sup>b</sup>**

	2002 (N=4,593)		2003 (N=4,616)		2004 (N=4,756)		2005 (N=4,878)		2006 (N=4,692)	
	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate
Total	264.5	260.8	245.8	244.7	255.2	254.9	261.6	260.4	252.7	250.0
Age										
▶ 0-2	705.8		691.2		732.9		709.7		686.5	
3-10	259.0*		234.9*		233.2*		259.0*		248.9*	
11-17	82.8*		74.5*		84.4*		80.2*		74.6*	
Race/ethnicity										
▶ White	294.2	292.8	266.3	264.4	254.3	252.0	264.3	261.1	250.6	246.8
Black	186.7*	207.2	160.8*	172.3	178.2*	188.7	200.5*	213.3	169.8*	175.7
Hispanic	287.7*	293.9	246.9*	257.8	275.2*	285.3	257.0*	268.9	239.6*	246.3
Asian	270.3*	248.2	374.3*	342.5	298.6*	266.6	286.2*	258.7	265.6*	236.8
Other	457.1*	433.2	341.1*	323.3	332.4*	318.9	297.2*	283.8	386.9*	376.0
Unknown	314.6*	...	281.9*	...	301.4*	...	254.7*	...	306.9*	...
Missing	239.4*	...	215.8*	...	239.4*	...	265.9*	...	254.5*	...
Region										
Northeast	387.6*	367.7	300.4*	289.1	334.1*	325.9	335.4*	328.1	349.5*	344.7
South	221.9*	225.4	211.0*	216.8	216.7*	223.5	229.6*	234.4	211.4*	213.5
▶ Midwest	275.2	270.9	272.0	268.5	271.2	267.5	278.1	275.5	281.1	277.0
West	268.1*	253.5	239.3*	229.0	274.4*	265.0	260.2*	249.6	243.3	232.0

... 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 13-19. Nationally representative physician office visits for undescended testes listed as any diagnosis, 2002-2007 (merged), 6-year count**

	6-Year Count
Total	644,218
Age	
0-2	433,091
3-10	202,694
11-17	8,433
Race/ethnicity	
White	562,485
Black	34,335
Hispanic	47,398
Region	
Northeast	41,366
South	332,729
Midwest	181,933
West	88,190

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



**Table 13-20. Emergency room visits by privately insured individuals for undescended testes listed as primary diagnosis, rate,<sup>a</sup> age-adjusted rate<sup>b</sup>**

	2002 (N=52)		2003 (N=45)		2004 (N=23)		2005 (N=15)		2006 (N=20)	
	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate	Rate	Age-Adjusted Rate
Total	3.0	3.0	2.4	2.4	1.2*	1.3	0.8*	0.8	1.1*	1.1
Age										
▶ 0-2	1.4*		4.0*		2.7*		2.3*		2.6*	
3-10	2.2**		1.4**		0.4**		0.1**		1.1**	
11-17	4.6*		2.9**		1.6**		0.9**		0.4**	
Race/ethnicity										
▶ White	3.7*	4.4	2.5*	2.5	0.5*	0.5	0.6*	1.1	0.7*	0.7
Black	6.3**	8.0	12.1**	21.0	2.3**	2.6	...	...	...	...
Hispanic	1.3**	2.7	1.7**	10.1	1.8**	10.6	1.7**	3.2	0.6**	3.2
Asian	...	...	...	...	3.8**	11.8	...	...	...	...
Other	...	...	...	...	...	...	4.5**	13.5	...	...
Unknown	...	...	1.1**	...	2.6**	...	1.7**	...	2.5**	...
Missing	2.8**	...	1.8**	...	2.6**	...	0.7**	...	2.9**	...
Region										
Northeast	...	...	1.0**	2.1	0.5*	3.0	1.0*	1.8	...	...
South	1.6**	1.7	2.6*	2.6	1.1*	2.1	0.3**	0.6	0.6**	0.6
▶ Midwest	6.3	6.4	3.3*	3.3	2.0*	2.1	1.8*	1.8	2.5*	2.5
West	0.5**	2.5	0.4**	2.5	...	...	...	...	...	...

... 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 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 13-21. Nationally representative emergency room visits for undescended testes listed as primary diagnosis, 2002-2007 (merged), 6-year count**

	6-Year Count
Total	5,279
Age	
0-2	1,905
3-10	3,374
11-17	...
Race/ethnicity	
White	5,279
Black	...
Hispanic	...
Region	
Northeast	3,374
South	...
Midwest	...
West	1,905

... Data unavailable.

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

**Urologic  
Diseases**  
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