



AHRQ Quality Indicators™ (AHRQ QI™) ICD-10-CM/PCS Specification Version 6.0

Patient Safety Indicator 10 (PSI 10) Postoperative Acute Kidney Injury Requiring Dialysis

July 2016

Provider-Level Indicator

Type of Score: Rate

Prepared by:

Agency for Healthcare Research and Quality

U.S. Department of Health and Human Services

www.qualityindicators.ahrq.gov

DESCRIPTION

Postoperative acute kidney failure requiring dialysis per 1,000 elective surgical discharges for patients ages 18 years and older. Excludes cases with principal diagnosis of acute kidney failure; cases with secondary diagnosis of acute kidney failure present on admission; cases with secondary diagnosis of acute kidney failure and dialysis procedure before or on the same day as the first operating room procedure; cases with acute kidney failure, cardiac arrest, shock, urinary tract obstruction or chronic kidney failure; and obstetric cases.

[NOTE: The software provides the rate per hospital discharge. However, common practice reports the measure as per 1,000 discharges. The user must multiply the rate obtained from the software by 1,000 to report events per 1,000 hospital discharges.]

NUMERATOR

Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with:

- any secondary ICD-10-CM diagnosis codes for acute kidney failure and any-listed ICD-10-PCS procedure codes for dialysis

Acute kidney (renal) failure diagnosis codes: (PHYSIDB)

N170	Acute kidney failure with tubular necrosis	N179	Acute kidney failure, unspecified
N171	Acute kidney failure with acute cortical necrosis	N19	Unspecified kidney failure
N172	Acute kidney failure with medullary necrosis	N990	Postprocedural (acute) (chronic) kidney failure
N178	Other acute kidney failure		

Dialysis procedure codes: (DIALYIP)

3E1M39Z	Irrigation of Peritoneal Cavity using Dialysate, Percutaneous Approach	5A1D60Z	Performance of Urinary Filtration, Multiple
5A1D00Z	Performance of Urinary Filtration, Single		

DENOMINATOR

Elective surgical discharges, for patients ages 18 years and older, with any-listed ICD-10-PCS procedure codes for an operating room procedure. Elective surgical discharges are defined by specific MS codes with admission type recorded as elective (SID ATYPE=3).

[*Appendix A - Operating Room Procedure Codes*](#)

[*Appendix E - Surgical Discharge MS-DRGs \(for discharges on or after October 1, 2007\)*](#)

DENOMINATOR EXCLUSIONS

Exclude cases:

- with a principal ICD-10-CM diagnosis code (or secondary diagnosis present on admission*) for acute kidney failure
- with any dialysis procedure that occurs before or on the same day as the first operating room procedure**
- with a principal ICD-10-CM diagnosis code (or secondary diagnosis present on admission) for cardiac arrest
- with a principal ICD-10-CM diagnosis code (or secondary diagnosis present on admission) for shock
- with a principal ICD-10-CM diagnosis code for urinary tract obstruction
- with a principal ICD-10-CM diagnosis code (or secondary diagnosis present on admission) for chronic kidney failure
- MDC 14 (pregnancy, childbirth and the puerperium)
- with missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing), or principal diagnosis (DX1=missing)

*Only for cases that otherwise qualify for the numerator

**If day of procedure is not available in the input data file, the rate may be slightly lower than if the information was available

Cardiac arrest diagnosis codes: (CARDIID)

I462	Cardiac arrest due to underlying cardiac condition	I469	Cardiac arrest, cause unspecified
I468	Cardiac arrest due to other underlying condition		

Shock diagnosis codes: (SHOCKID)

O0331	Shock following incomplete spontaneous abortion	T782XXA	Anaphylactic shock, unspecified, initial encounter
O0381	Shock following complete or unspecified spontaneous abortion	T8051XA	Anaphylactic reaction due to administration of blood and blood products, initial encounter
O0481	Shock following (induced) termination of pregnancy	T8052XA	Anaphylactic reaction due to vaccination, initial encounter
O0731	Shock following failed attempted termination of pregnancy	T8059XA	Anaphylactic reaction due to other serum, initial encounter

O083	Shock following ectopic and molar pregnancy	T8110XA	Postprocedural shock unspecified, initial encounter
O751	Shock during or following labor and delivery	T8111XA	Postprocedural cardiogenic shock, initial encounter
R570	Cardiogenic shock	T8112XA	Postprocedural septic shock, initial encounter
R571	Hypovolemic shock	T8119XA	Other postprocedural shock, initial encounter
R578	Other shock	T882XXA	Shock due to anesthesia, initial encounter
R579	Shock, unspecified	T886XXA	Anaphylactic reaction due to adverse effect of correct drug or medicament properly administered, initial encounter
R6521	Severe sepsis with septic shock		

Urinary tract obstruction codes: (URINARYOBSID)

N138	Other obstructive and reflux uropathy	N35014	Post-traumatic urethral stricture, male, unspecified
N13721	Vesicoureteral-reflux with reflux nephropathy without hydroureter, unilateral	N35021	Urethral stricture due to childbirth
N13731	Vesicoureteral-reflux with reflux nephropathy with hydroureter, unilateral	N35028	Other post-traumatic urethral stricture, female
N13722	Vesicoureteral-reflux with reflux nephropathy without hydroureter, bilateral	N99110	Postprocedural urethral stricture, male, meatal
N13732	Vesicoureteral-reflux with reflux nephropathy with hydroureter, bilateral	N99111	Postprocedural bulbous urethral stricture
N13729	Vesicoureteral-reflux with reflux nephropathy without hydroureter, unspecified	N99112	Postprocedural membranous urethral stricture
N13739	Vesicoureteral-reflux with reflux nephropathy with hydroureter, unspecified	N99113	Postprocedural anterior urethral stricture

N139	Obstructive and reflux uropathy, unspecified	N99114	Postprocedural urethral stricture, male, unspecified
N320	Bladder-neck obstruction	N9912	Postprocedural urethral stricture, female
N35111	Postinfective urethral stricture, not elsewhere classified, male, meatal	N358	Other urethral stricture
N35112	Postinfective bulbous urethral stricture, not elsewhere classified	N359	Urethral stricture, unspecified
N35113	Postinfective membranous urethral stricture, not elsewhere classified	N401	Enlarged prostate with lower urinary tract symptoms
N35114	Postinfective anterior urethral stricture, not elsewhere classified	N403	Nodular prostate with lower urinary tract symptoms
N35119	Postinfective urethral stricture, not elsewhere classified, male, unspecified	Q642	Congenital posterior urethral valves
N3512	Postinfective urethral stricture, not elsewhere classified, female	Q6431	Congenital bladder neck obstruction
N35010	Post-traumatic urethral stricture, male, meatal	Q6432	Congenital stricture of urethra
N35011	Post-traumatic bulbous urethral stricture	Q6433	Congenital stricture of urinary meatus
N35012	Post-traumatic membranous urethral stricture	Q6439	Other atresia and stenosis of urethra and bladder neck
N35013	Post-traumatic anterior urethral stricture		

Chronic kidney (renal) failure diagnosis codes: (CRENLFD)

I120	Hypertensive chronic kidney disease with stage 5 chronic kidney disease or end stage renal disease	N185	Chronic kidney disease, stage 5
I1311	Hypertensive heart and chronic kidney disease without heart failure, with stage 5 chronic kidney disease, or end stage renal disease	N186	End stage renal disease
I132	Hypertensive heart and chronic kidney disease with heart failure and with stage 5 chronic kidney disease, or end stage renal disease		