Dehydration Admission Rate  
Technical Specifications

Prevention Quality Indicators #10 (PQI #10)
AHRQ Quality Indicators™, Version 5.0
March 2015
Area-Level Indicator
Type of Score: Rate

Description
Admissions with a principal diagnosis of dehydration per 100,000 population, ages 18 years and older. Excludes obstetric admissions and transfers from other institutions.

[NOTE: The software provides the rate per population. However, common practice reports the measure as per 100,000 population. The user must multiply the rate obtained from the software by 100,000 to report admissions per 100,000 population.]

Numerator
Discharges, for patients ages 18 years and older, with either
- a principal ICD-9-CM diagnosis code for dehydration; or
- any secondary ICD-9-CM diagnosis codes for dehydration and a principal ICD-9-CM diagnosis code for hyperosmolality and/or hypernatremia, gastroenteritis, or acute kidney injury

[NOTE: By definition, discharges with a principal diagnosis of dehydration, hyperosmolality and/or hypernatremia, gastroenteritis, or acute kidney injury are precluded from an assignment of MDC 14 by grouper software. Thus, obstetric discharges should not be considered in the PQI rate, though the AHRQ QITM software does not explicitly exclude obstetric cases.]

ICD-9-CM Dehydration diagnosis codes:
2765 HYPOVOLEMIA
27650 VOLUME DEPLETION
27651 DEHYDRATION
27652 HYPOVOLEMIA

ICD-9-CM Hyperosmolality and/or hypernatremia diagnosis codes:
2760 HYPEROSMOLALITY

ICD-9-CM Gastroenteritis diagnosis codes:
00861 INT INFEC ROTAVIRUS
00862 INT INFEC ADENOVIRUS
00863 INT INF NORWALK VIRUS
00864 INT INF OTH SML RND VRUS
00865 INT INFEC CALCIVIRUS
00866 INT INFEC ASTROVIRUS
00867 INT INF ENTEROVIRUS NEC
00869 ENTERITIS NOS
0088 VIRAL ENTERITIS NOS
0090 INFECTIOUS ENTERITIS NOS
0091 ENTERITIS OF INFECT ORIG
0092 INFECTIOUS DIARRHEA NOS
0093 DIARRHEA OF INFECT ORIG
5589 NONINF GASTROENTERIT NEC
ICD-9-CM Acute kidney failure diagnosis code:

- 5845 AC KIDNY FAIL, TUBR NECR
- 5846 AC KIDNY FAIL, CORT NECR
- 5847 AC KIDNY FAIL, MEDU NECR
- 5848 ACUTE KIDNEY FAILURE NEC

Exclude cases:
- transfer from a hospital (different facility)
- transfer from a Skilled Nursing Facility (SNF) or Intermediate Care Facility (ICF)
- transfer from another health care facility
- with any-listed ICD-9-CM diagnosis codes for chronic renal failure
- with missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing), principal diagnosis (DX1=missing), or county (PSTCO=missing)

See Prevention Quality Indicators Appendices:
- Appendix A – Admission Codes for Transfers

ICD-9-CM Chronic renal failure diagnosis codes:

<table>
<thead>
<tr>
<th>Code</th>
<th>Diagnosis</th>
</tr>
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<tbody>
<tr>
<td>40301</td>
<td>MAL HYP KIDNEY W CHR KID</td>
</tr>
<tr>
<td>40311</td>
<td>BEN HYP KIDNEY W CHR KID</td>
</tr>
<tr>
<td>40391</td>
<td>HYP KIDNEY NOS W CHR KID</td>
</tr>
<tr>
<td>40402</td>
<td>MAL HY HRT/KID W CHR KID</td>
</tr>
<tr>
<td>40403</td>
<td>MAL HYP HRT/KID W HF/KID</td>
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<td>40412</td>
<td>BEN HYP HT/KID W CHR KID</td>
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</tr>
<tr>
<td>5855</td>
<td>CHRON KIDNEY DIS STAGE V</td>
</tr>
<tr>
<td>5856</td>
<td>END STAGE RENAL DISEASE</td>
</tr>
</tbody>
</table>

Denominator

Population ages 18 years and older in metropolitan area† or county. Discharges in the numerator are assigned to the denominator based on the metropolitan area or county of the patient residence, not the metropolitan area or county of the hospital where the discharge occurred.

† The term “metropolitan area” (MA) was adopted by the U.S. Census in 1990 and referred collectively to metropolitan statistical areas (MSAs), consolidated metropolitan statistical areas (CMSAs), and primary metropolitan statistical areas (PMSAs). In addition, “area” could refer to either 1) FIPS county, 2) modified FIPS county, 3) 1999 OMB Metropolitan Statistical Area, or 4) 2003 OMB Metropolitan Statistical Area. Micropolitan Statistical Areas are not used in the QI software.