



# PREVENTION QUALITY INDICATORS™ v6.0 ICD-9-CM Benchmark Data Tables

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## Introduction

The data presented in this document are nationwide comparative rates for Version 6.0 of Agency for Healthcare Research and Quality (AHRQ) Quality Indicators™ (QI) Prevention Quality Indicators (PQI) software. The numerators, denominators and observed rates shown in this document are based on an analysis of discharge data from 40<sup>1</sup> States from the 2013 AHRQ Healthcare Cost and Utilization Project (HCUP) State Inpatient Databases (SID).<sup>2</sup> HCUP is a family of health care databases and related software tools and products developed through a Federal-State-industry partnership<sup>2</sup>. HCUP includes the largest collection of longitudinal hospital care data in the United States, with all-payer, encounter-level information beginning in 1988. The SID contains all-payer, encounter-level information on inpatient discharges, including clinical and resource information typically found on a billing record, such as patient demographics, up to 30 International Classification of Diseases, Ninth Revision, Clinical Modification diagnoses and procedures, length of stay, expected payer, admission and discharge dates, and discharge disposition. In 2013, the HCUP databases represented more than 97 percent of all annual discharges in the United States.

The analytic dataset used to generate the tables in this document consists of the same hospital discharge records that comprise the reference population for Version 6.0 of the AHRQ QI software. Additional information on the reference population and the risk adjustment process may be found in Quality Indicator Empirical Methods, available on the AHRQ QITM website. (<http://www.qualityindicators.ahrq.gov/modules/Default.aspx>)

The QI observed rates for area-level indicators are per 100,000 000 population, with one exception (PQI 02 which is reported per 1,000 persons at risk),

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<sup>1</sup>The states included in the analysis are Arkansas, Arizona, California, Colorado, Connecticut, Florida, Georgia, Hawaii, Iowa, Illinois, Indiana, Kansas, Kentucky, Maryland, Michigan, Minnesota, Missouri, Montana, North Carolina, North Dakota, Nebraska, New Jersey, New Mexico, Nevada, New York, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, Vermont, Washington, Wisconsin, West Virginia, and Wyoming.

<sup>2</sup>HCUP State Inpatient Databases (SID). Healthcare Cost and Utilization Project (HCUP). 2005-2009. Agency for Healthcare Research and Quality, Rockville, MD. [www.hcup-us.ahrq.gov/sidoverview.jsp](http://www.hcup-us.ahrq.gov/sidoverview.jsp)

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Table 1. Prevention Quality Indicators for Overall Population

INDICATOR	LABEL	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
PQI 01	Diabetes Short-Term Complications Admission Rate	151,537	219,821,810	68.94
PQI 01 <sup>a</sup>	Diabetes Short-Term Complications Admission Rate	151,537	22,665,369	668.58
PQI 02 <sup>b</sup>	Perforated Appendix Admission Rate	50,654	144,166	351.36
PQI 03	Diabetes Long-Term Complications Admission Rate	223,284	219,822,380	101.57
PQI 03 <sup>a</sup>	Diabetes Long-Term Complications Admission Rate	223,284	22,665,369	985.13
PQI 05	Chronic Obstructive Pulmonary Disease (COPD) or Asthma in Older Adults Admission Rate	654,195	136,023,122	480.94
PQI 07	Hypertension Admission Rate	108,126	219,822,027	49.19
PQI 08	Heart Failure Admission Rate	706,921	219,837,416	321.57
PQI 10	Dehydration Admission Rate	286,046	219,824,918	130.12
PQI 11	Bacterial Pneumonia Admission Rate	548,810	219,835,576	249.65
PQI 12	Urinary Tract Infection Admission Rate	341,980	219,827,114	155.57
PQI 14	Uncontrolled Diabetes Admission Rate	28,912	219,821,677	13.15
PQI 14 <sup>a</sup>	Uncontrolled Diabetes Admission Rate	28,912	22,665,369	127.56
PQI 15	Asthma in Younger Adults Admission Rate	34,474	83,810,329	41.13
PQI 16	Lower - Extremity Amputation Among Patients With Diabetes Rate	37,691	219,821,718	17.15
PQI 16 <sup>a</sup>	Lower - Extremity Amputation Among Patients With Diabetes Rate	37,691	22,665,369	166.29
PQI 90	Prevention Quality Overall Composite	3,104,939	219,916,229	1411.87
PQI 91	Prevention Quality Acute Composite	1,176,836	219,853,500	535.28
PQI 92	Prevention Quality Chronic Composite	1,928,164	219,865,861	876.97
PQI 93	Prevention Quality Diabetes Composite	424,602	219,823,101	193.16

<sup>a</sup> Rate computed among persons with diabetes

<sup>b</sup> Rate is scaled to per 1,000 persons at risk

**Table 2a. PQI 01 – Diabetes Short-Term Complications Admission Rate**

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
Overall	151,537	219,821,810	68.94
Females	74,272	112,879,924	65.8
Males	77,265	106,941,886	72.25
18 to 39 years	72,296	83,810,373	86.26
40 to 64 years	62,767	95,139,388	65.97
65 to 74 years	9,916	23,036,570	43.04
75+ years	6,558	17,835,479	36.77

**Table 2b. PQI 01 – Diabetes Short-Term Complications Admission Rate<sup>a</sup>**

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
Overall	151,537	22,665,369	668.58
18 to 64 years	135,063	14,050,012	961.3
65 to 74 years	9,916	4,886,740	202.92
75+ years	6,558	3,728,617	175.88

<sup>a</sup>Denominator is the diabetic population

**Table 3. PQI 02 – Perforated Appendix Admission Rate**

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 1,000 (=OBSERVED RATE*1,000)
Overall	50,654	144,166	351.36
Females	22,176	67,828	326.94
Males	28,478	76,338	373.05
18 to 39 years	15,521	66,011	235.13
40 to 64 years	23,503	56,492	416.04
65 to 74 years	6,808	12,970	524.9
75+ years	4,822	8,693	554.7

Note: Denominator is based on the number of discharges with a diagnosis of appendicitis, rather than the Metro Area or county population. Rate is scaled to per 1,000 persons at risk.

**Table 4a. PQI 03 – Diabetes Long-Term Complications Admission Rate**

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
Overall	223,284	219,822,380	101.57
Females	95,433	112,880,067	84.54
Males	127,851	106,942,313	119.55
18 to 39 years	23,996	83,810,327	28.63
40 to 64 years	115,099	95,139,494	120.98
65 to 74 years	43,176	23,036,709	187.42
75+ years	41,013	17,835,850	229.95

**Table 4b. PQI 03 – Diabetes Long-Term Complications Admission Rate<sup>a</sup>**

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATEx*100,000)
Overall	223,284	22,665,369	985.13
18 to 64 years	139,095	14,050,012	990
65 to 74 years	43,176	4,886,740	883.53
75+ years	41,013	3,728,617	1099.95

<sup>a</sup> Denominator is the diabetic population

**Table 5. PQI 05 – Chronic Obstructive Pulmonary Disease (COPD) or Asthma in Older Adults Admission Rate**

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATEx*100,000)
Overall	654,195	136,023,122	480.94
Females	392,371	71,492,629	548.83
Males	261,824	64,530,493	405.74
40 to 64 years	275,325	95,141,258	289.39
65 to 74 years	177,685	23,040,148	771.2
75+ years	201,185	17,841,716	1127.61

**Table 6. PQI 07 – Hypertension Admission Rate**

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATEx*100,000)
Overall	109,186	201,199,069	54.27
Females	65,018	103,365,245	62.9
Males	44,168	97,833,824	45.15
18 to 39 years	9,206	76,709,774	12
40 to 64 years	51,430	88,042,826	58.41
65 to 74 years	18,492	20,256,439	91.29
75+ years	30,058	16,190,030	185.66

**Table 7. PQI 08 – Heart Failure Admission Rate**

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATEx*100,000)
Overall	706,921	219,837,416	321.57
Females	348,826	112,888,086	309
Males	358,095	106,949,330	334.83
18 to 39 years	15,777	83,810,322	18.82
40 to 64 years	182,131	95,139,694	191.44
65 to 74 years	148,641	23,038,383	645.19
75+ years	360,372	17,849,017	2019

**Table 8. PQI 10 – Dehydration Admission Rate**

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
Overall	286,046	219,824,918	130.12
Females	160,882	112,881,724	142.52
Males	125,164	106,943,194	117.04
18 to 39 years	22,226	83,810,332	26.52
40 to 64 years	81,756	95,139,472	85.93
65 to 74 years	58,058	23,036,867	252.02
75+ years	124,006	17,838,247	695.17

**Table 9. PQI 11 – Bacterial Pneumonia Admission Rate**

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
Overall	548,810	219,835,576	249.65
Females	294,945	112,887,076	261.27
Males	253,865	106,948,500	237.37
18 to 39 years	34,202	83,810,347	40.81
40 to 64 years	155,734	95,140,034	163.69
65 to 74 years	110,500	23,038,541	479.63
75+ years	248,374	17,846,654	1391.71

**Table 10. PQI 12 – Urinary Tract Infection Admission Rate**

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
Overall	341,980	219,827,114	155.57
Females	251,757	112,883,957	223.02
Males	90,223	106,943,157	84.37
18 to 39 years	37,377	83,810,338	44.6
40 to 64 years	70,049	95,139,427	73.63
65 to 74 years	54,993	23,036,983	238.72
75+ years	179,561	17,840,366	1006.49

**Table 11a. PQI 14 – Uncontrolled Diabetes Admission Rate**

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
Overall	28,912	219,821,677	13.15
Females	14,300	112,879,850	12.67
Males	14,612	106,941,827	13.66
18 to 39 years	4,891	83,810,313	5.84
40 to 64 years	14,830	95,139,330	15.59
65 to 74 years	4,691	23,036,565	20.36
75+ years	4,500	17,835,469	25.23



**Table 11b. PQI 14 – Uncontrolled Diabetes Admission Rate<sup>a</sup>**

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
18 to 64 years	19,721	14,050,012	140.36
65 to 74 years	4,691	4,886,740	95.99
75+ years	4,500	3,728,617	120.69

<sup>a</sup> Denominator is the diabetic population

**Table 12. PQI 15 – Asthma in Younger Adults Admission Rate**

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
Overall	34,474	83,810,329	41.13
Females	22,896	41,394,071	55.31
Males	11,578	42,416,258	27.3
18 to 39 years	34,474	83,810,329	41.13

**Table 13a. PQI 16 – Lower-Extremity Amputation Among Patients With Diabetes Rate**

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
Overall	37,691	219,821,718	17.15
Females	11,938	112,879,842	10.58
Males	25,753	106,941,876	24.08
18 to 39 years	1,183	83,810,312	1.41
40 to 64 years	19,384	95,139,333	20.37
65 to 74 years	9,467	23,036,575	41.1
75+ years	7,657	17,835,498	42.93

**Table 13b. PQI 16 – Lower-Extremity Amputation Among Patients With Diabetes Rate<sup>a</sup>**

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
18 to 64 years	20,567	14,050,012	146.38
65 to 74 years	9,467	4,886,740	193.73
75+ years	7,657	3,728,617	205.36

<sup>a</sup> Denominator is the diabetic population

**Table 14. PQI 90 – Prevention Quality Overall Composite<sup>a</sup>**

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
Overall	3,104,939	219,916,229	1411.87
Females	1,726,075	112,933,338	1528.4
Males	1,378,864	106,982,891	1288.86
18 to 39 years	255,401	83,810,764	304.74
40 to 64 years	1,018,200	95,153,483	1070.06
65 to 74 years	631,624	23,057,575	2739.33
75+ years	1,199,714	17,894,407	6704.41

<sup>a</sup> Composite includes PQI 1, 3, 5, 7, 8, 10, 11, 12, 14, 15 and 16

**Table 15. PQI 91 – Prevention Quality Acute Composite<sup>a</sup>**

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
Overall	1,176,836	219,853,500	535.28
Females	707,584	112,899,000	626.74
Males	469,252	106,954,500	438.74
18 to 39 years	93,805	83,810,426	111.93
40 to 64 years	307,539	95,141,338	323.24
65 to 74 years	223,551	23,041,627	970.2
75+ years	551,941	17,860,109	3090.36

<sup>a</sup> Composite includes PQI 10, 11 and 12

**Table 16. PQI 92 – Prevention Quality Chronic Composite<sup>a</sup>**

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
Overall	1,928,164	219,865,861	876.97
Females	1,018,513	112,903,692	902.11
Males	909,651	106,962,169	850.44
18 to 39 years	161,598	83,810,484	192.81
40 to 64 years	710,677	95,145,822	746.93
65 to 74 years	408,087	23,047,172	1770.66
75+ years	647,802	17,862,383	3626.63

<sup>a</sup> Composite includes PQI 1, 3, 5, 7, 8, 14, 15 and 16

**Table 17. PQI 93 – Prevention Quality Diabetic Composite<sup>a</sup>**

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
Overall	424,602	219,823,101	193.16
Females	191,116	112,880,381	169.31
Males	233,486	106,942,720	218.33
18 to 39 years	101,714	83,810,415	121.36
40 to 64 years	202,711	95,139,738	213.07
65 to 74 years	63,324	23,036,831	274.88
75+ years	56,853	17,836,117	318.75

<sup>a</sup> Composite includes PQI 1, 3, 14 and 16