



PREVENTION QUALITY INDICATOR v4.5 BENCHMARK DATA TABLES

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* (Denominator is the diabetic population aged 18-64)

Introduction

The data presented in this document are nationwide comparative rates for the Agency for Healthcare Research and Quality (AHRQ) Prevention Quality Indicators (PQI). The rates are based on analysis of 44 states from the 2010 Agency for Healthcare Research and Quality's Healthcare Cost and Utilization Project (HCUP) State Inpatient Databases (SID)¹. HCUP is a family of health care databases and related software tools and products developed through a Federal-State-Industry partnership². 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 contain 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 (ICD-9-CM)* diagnoses and procedures, length of stay (LOS), expected payer, admission and discharge dates and discharge disposition. In 2010, the HCUP databases represent more than 95 percent of all annual discharges in the U.S. The dataset analyzed to generate the tables in this document consists of the same hospital discharge records that comprise the reference population for version 4.5 of the AHRQ QI.

The QI observed rates for most area-level indicators are scaled to the rate per 1,000 persons at risk and the area-level indicators are per 100,000. The rate for PQI #2 are presented per 1,000 persons at risk. Volume and count indicator results are listed as simple counts with no scaling at all. Rates for any cells with 1-10 cases are not presented. For additional detail about the AHRQ QI, consult the technical documentation at <http://www.qualityindicators.ahrq.gov>.

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

² The AHRQ QI program would like to acknowledge the HCUP Partner organizations that participated in the HCUP SID: **Alaska** State Hospital and Nursing Home Association, **Arizona** Department of Health Services, **Arkansas** Department of Health, **California** Office of Statewide Health Planning and Development, **Colorado** Hospital Association, **Connecticut** Hospital Association, **Florida** Agency for Health Care Administration, **Georgia** Hospital Association, **Hawaii** Health Information Corporation, **Illinois** Department of Public Health, **Indiana** Hospital Association, **Iowa** Hospital Association, **Kansas** Hospital Association, **Kentucky** Cabinet for Health and Family Services, **Louisiana** Department of Health and Hospitals, **Maine** Health Data Organization, **Maryland** Health Services Cost Review Commission, **Massachusetts** Center for Health Information and Analysis, **Michigan** Health & Hospital Association, **Minnesota** Hospital Association (provides data for Minnesota and North Dakota), **Mississippi** Department of Health, **Missouri** Hospital Industry Data Institute, **Montana** MHA - An Association of Montana Health Care Providers, **Nebraska** Hospital Association, **Nevada** Department of Health and Human Services, **New Hampshire** Department of Health & Human Services, **New Jersey** Department of Health, **New Mexico** Department of Health, **New York** State Department of Health, **North Carolina** Department of Health and Human Services, **North Dakota** (data provided by the Minnesota Hospital Association), **Ohio** Hospital Association, **Oklahoma** State Department of Health, **Oregon** Association of Hospitals and Health Systems, **Oregon** Health Policy and Research, **Pennsylvania** Health Care Cost Containment Council, **Rhode Island** Department of Health, **South Carolina** Budget & Control Board, **South Dakota** Association of Healthcare Organizations, **Tennessee** Hospital Association, **Texas** Department of State Health Services, **Utah** Department of Health, **Vermont** Association of Hospitals and Health Systems, **Virginia** Health Information, **Washington** State Department of Health, **West Virginia** Health Care Authority, **Wisconsin** Department of Health Services, **Wyoming** Hospital Association

For PQI #1, #3, #14, and #16, the rates are presented twice, first with denominators from the census data, and then again with denominators that are an estimate of the number of adults (18-64) living with diabetes. The 2010 diabetic population denominator data were retrieved from http://www.cdc.gov/diabetes/statistics/prevalence_national.htm. These rates with condition-specific denominators can also be calculated with the QI SAS software at the state feature level.

Table 1 lists the PQI figures calculated for the overall reference population. Subsequent tables each focus on a single indicator and present the overall figures again, along with figures stratified by gender and age group.

Table 1. Prevention Quality Indicators (PQI) For Overall Population

INDICATOR	LABEL	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
PQI #1	Diabetes Short-Term Complications Admission Rate	140,353	234,875,253	59.76
PQI #1*	Diabetes Short-Term Complications Admission Rate	126,202	14,032,295	899.37
PQI #2	Perforated Appendix Admission Rate	59,729	200,940	29,724.79
PQI #3	Diabetes Long-Term Complications Admission Rate	262,557	234,876,636	111.79
PQI #3*	Diabetes Long-Term Complications Admission Rate	157,622	14,032,295	1,123.28
PQI #5	Chronic Obstructive Pulmonary Disease (COPD) or Asthma in Older Adults Admission Rate	683,128	143,136,917	477.25
PQI #7	Hypertension Admission Rate	133,834	234,875,893	56.98
PQI #8	Heart Failure Admission Rate	774,807	234,916,086	329.82
PQI #9	Low Birth Weight Rate	228,405	3,655,006	6,249.10
PQI #10	Dehydration Admission Rate	273,594	234,881,400	116.48
PQI #11	Bacterial Pneumonia Admission Rate	669,212	234,908,563	284.88
PQI #12	Urinary Tract Infection Admission Rate	427,378	234,891,814	181.95
PQI #13	Angina Without Procedure Admission Rate	42,796	234,875,320	18.22
PQI #14	Uncontrolled Diabetes Admission Rate	42,469	234,875,096	18.08
PQI #14*	Uncontrolled Diabetes Admission Rate	29,434	14,032,295	209.76
PQI #15	Asthma in Younger Adults Admission Rate	46,489	91,767,781	50.66
PQI #16	Lower-Extremity Amputation Among Patients With Diabetes Rate	35,477	234,875,126	15.10
PQI #16*	Lower-Extremity Amputation Among Patients With Diabetes Rate	18,297	14,032,295	130.39
PQI #90	Prevention Quality Overall Composite	3,515,676	235,115,531	1,495.30
PQI #91	Prevention Quality Acute Composite	1,370,184	234,953,807	583.17
PQI #92	Prevention Quality Chronic Composite	2,145,559	234,995,220	913.02

* (Denominator is the diabetic population aged 18-64)

Table 2. PQI #1 - Diabetes Short-Term Complications Admission Rate

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
Overall	140,353	234,875,253	59.76
Females	67,787	120,848,230	56.09
Males	72,566	114,027,023	63.64
18 to 39 years	67,219	91,767,825	73.25
40 to 64 years	58,983	102,672,852	57.45
65 to 74 years	8,059	21,839,938	36.90
75+ years	6,092	18,594,638	32.76

Table 3. PQI #1 - Diabetes Short-Term Complications Admission Rate*

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
18 to 64 years	126,202	14,032,295	899.37
65 to 74 years	8,059	4,749,383	169.69
75+ years	6,092	3,679,814	165.55

* (Denominator is the diabetic population aged 18-64)

Table 4. PQI #2 - Perforated Appendix Admission Rate

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 1,000 (=OBSERVED RATE*1,000)
Overall	59,729	200,940	297.24
Females	26,036	94,243	276.26
Males	33,693	106,697	315.78
18 to 39 years	18,602	98,514	188.82
40 to 64 years	28,127	77,220	364.24
65 to 74 years	7,299	14,853	491.41
75+ years	5,701	10,353	550.66

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 5. PQI #3 - Diabetes Long-Term Complications Admission Rate

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
Overall	262,557	234,876,636	111.79
Females	120,252	120,848,744	99.51
Males	142,305	114,027,892	124.80
18 to 39 years	28,695	91,767,746	31.27
40 to 64 years	128,927	102,673,012	125.57
65 to 74 years	49,959	21,840,248	228.75
75+ years	54,976	18,595,630	295.64

Table 6. PQI #3 - Diabetes Long-Term Complications Admission Rate *

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
18 to 64 years	157,622	14,032,295	1,123.28
65 to 74 years	49,959	4,749,383	1,051.91
75+ years	54,976	3,679,814	1,493.99

* (Denominator is the diabetic population aged 18-64)

Table 7. PQI #5 - Chronic Obstructive Pulmonary Disease (COPD) or Asthma in Older Adults Admission Rate

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
Overall	683,128	143,136,917	477.25
Females	415,303	75,388,510	550.88
Males	267,825	67,748,407	395.32
40 to 64 years	295,192	102,677,222	287.50
65 to 74 years	178,262	21,850,060	815.84
75+ years	209,674	18,609,635	1,126.70

Table 8. PQI #7 - Hypertension Admission Rate

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
Overall	133,834	234,875,893	56.98
Females	79,811	120,848,770	66.04
Males	54,023	114,027,123	47.38
18 to 39 years	12,471	91,767,735	13.59
40 to 64 years	63,514	102,672,837	61.86
65 to 74 years	22,224	21,840,012	101.76
75+ years	35,625	18,595,309	191.58

Table 9. PQI #8 - Heart Failure Admission Rate

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
Overall	774,807	234,916,086	329.82
Females	393,540	120,870,456	325.59
Males	381,267	114,045,630	334.31
18 to 39 years	15,957	91,767,733	17.39
40 to 64 years	188,722	102,673,610	183.81
65 to 74 years	156,697	21,846,126	717.28
75+ years	413,431	18,628,617	2,219.33

Table 10. PQI #9 - Low Birth Weight Rate

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 1,000 (=OBSERVED RATE*1,000)
Overall	228,405	3,655,006	62.49
Females	116,686	1,783,400	65.42
Males	111,719	1,871,606	59.69
0 to 4 years	228,405	3,655,006	62.49

Note: Rate is scaled to per 1,000 persons at risk.

Table 11. PQI #10 - Dehydration Admission Rate

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
Overall	273,594	234,881,400	116.48
Females	163,086	120,852,185	134.95
Males	110,508	114,029,215	96.91
18 to 39 years	28,881	91,767,760	31.47
40 to 64 years	85,729	102,673,010	83.50
65 to 74 years	48,703	21,840,499	222.99
75+ years	110,281	18,600,131	592.90

Table 12. PQI #11 - Bacterial Pneumonia Admission Rate

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
Overall	669,212	234,908,563	284.88
Females	360,036	120,865,445	297.88
Males	309,176	114,043,118	271.10
18 to 39 years	47,230	91,767,808	51.47
40 to 64 years	193,861	102,674,219	188.81
65 to 74 years	127,841	21,845,626	585.20
75+ years	300,280	18,620,910	1,612.60

Table 13. PQI #12 - Urinary Tract Infection Admission Rate

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
Overall	427,378	234,891,814	181.95
Females	312,476	120,861,078	258.54
Males	114,902	114,030,736	100.76
18 to 39 years	51,307	91,767,793	55.91
40 to 64 years	87,977	102,673,003	85.69
65 to 74 years	64,851	21,841,140	296.92
75+ years	223,243	18,609,878	1,199.59

Table 14. PQI #13 - Angina Without Procedure Admission Rate

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
Overall	42,796	234,875,320	18.22
Females	22,123	120,848,267	18.31
Males	20,673	114,027,053	18.13
18 to 39 years	1,895	91,767,732	2.06
40 to 64 years	22,889	102,672,810	22.29
65 to 74 years	8,117	21,839,969	37.17
75+ years	9,895	18,594,809	53.21

Table 15. PQI #14 - Uncontrolled Diabetes Admission Rate

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
Overall	42,469	234,875,096	18.08
Females	21,384	120,848,145	17.69
Males	21,085	114,026,951	18.49
18 to 39 years	7,206	91,767,735	7.85
40 to 64 years	22,228	102,672,794	21.65
65 to 74 years	6,454	21,839,924	29.55
75+ years	6,581	18,594,643	35.39

Table 16. PQI #14 - Uncontrolled Diabetes Admission Rate*

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
18 to 64 years	29,434	14,032,295	209.76
65 to 74 years	6,454	4,749,383	135.89
75+ years	6,581	3,679,814	178.84

* (Denominator is the diabetic population aged 18-64)

Table 17. PQI #15 - Asthma in Younger Adults Admission Rate

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
Overall	46,489	91,767,781	50.66
Females	31,839	45,477,325	70.01
Males	14,650	46,290,456	31.65
18 to 39 years	46,489	91,767,781	50.66

Table 18. PQI #16 - Lower-Extremity Amputation Among Patients With Diabetes Rate

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
Overall	35,477	234,875,126	15.10
Females	12,290	120,848,132	10.17
Males	23,187	114,026,994	20.33
18 to 39 years	1,060	91,767,727	1.16
40 to 64 years	17,237	102,672,796	16.79
65 to 74 years	8,805	21,839,934	40.32
75+ years	8,375	18,594,669	45.04

Table 19. PQI #16 - Lower-Extremity Amputation Among Patients With Diabetes Rate*

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
18 to 64 years	18,297	14,032,295	130.39
65 to 74 years	8,805	4,749,383	185.39
75+ years	8,375	3,679,814	227.59

* (Denominator is the diabetic population aged 18-64)

Table 20. PQI #90 - Prevention Quality Overall Composite*

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
Overall	3,515,676	235,115,531	1,495.30
Females	1,994,745	120,988,091	1,648.71
Males	1,520,931	114,127,440	1,332.66
18 to 39 years	307,772	91,768,652	335.38
40 to 64 years	1,156,555	102,720,843	1,125.92
65 to 74 years	676,176	21,895,036	3,088.26
75+ years	1,375,173	18,731,000	7,341.70

* (PQI 1, 3, 5, 7, 8, 10, 11, 12, 13, 14, 15 and 16)

Table 21. PQI #91 - Prevention Quality Acute Composite*

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
Overall	1,370,184	234,953,807	583.17
Females	835,598	120,896,740	691.17
Males	534,586	114,057,067	468.70
18 to 39 years	127,418	91,767,996	138.85
40 to 64 years	367,567	102,677,552	357.98
65 to 74 years	241,395	21,854,521	1,104.55
75+ years	633,804	18,653,738	3,397.73

*(PQI 10, 11 and 12)

Table 22. PQI #92 - Prevention Quality Chronic Composite*

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
Overall	2,145,559	234,995,220	913.02
Females	1,159,179	120,915,139	958.67
Males	986,380	114,080,081	864.64
18 to 39 years	180,355	91,768,044	196.53
40 to 64 years	789,006	102,695,665	768.30
65 to 74 years	434,795	21,870,634	1,988.03
75+ years	741,403	18,660,877	3,973.03

* (PQI 1, 3, 5, 7, 8, 13, 14, 15 and 16)