

Diabetes Care Quality Improvement: A Resource Guide for State Action— Supplement



Background and Purpose of This Supplement

The Agency for Healthcare Research and Quality (AHRQ), as part of its mission to translate research into practice and improve health care quality, develops products to assist State leaders who aim to improve diabetes care in their States. Two of these resources, published in 2004, are:

- *Diabetes Care Quality Improvement: A Resource Guide for State Action*
- *Diabetes Care Quality Improvement: A Workbook for State Action*

These documents were based on AHRQ's *2003 National Healthcare Quality Report*, which established a baseline for measuring health care quality for the Nation overall and at the State level when data are available. The *Resource Guide* and its companion *Workbook* are intended to assist State leaders in considering the need for diabetes care improvements and in knowing how to foster change in their States. This supplement to the *Resource Guide* includes data on diabetes care from the *2004 National Healthcare Quality Report*, which was released in February 2005.

State-Level Diabetes Care Quality Indicators

This supplement presents four quality indicators that describe diabetes care at the State level. These four measures are based on the AHRQ Prevention Quality Indicators, which assess ambulatory care sensitive conditions—hospital admissions that, evidence suggests, could have been avoided, at least in part, through high-quality outpatient care. These potentially avoidable hospitalizations are outcome indicators for diabetes care in ambulatory settings within the State:

- Hospital admissions for uncontrolled diabetes per 100,000 population
- Hospital admissions for short-term complications of diabetes per 100,000 population
- Hospital admissions for long-term complications of diabetes per 100,000 population
- Hospital admissions for lower extremity amputations in patients with diabetes per 100,000 population

These quality indicators are derived from the Healthcare Cost and Utilization Project (HCUP) State Inpatient Databases, a series of State-specific databases that capture all discharge records from hospitals in each State. These data are produced by a Federal-State-Industry partnership currently involving 38 States.



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The 32 States analyzed in the 2004 quality report (see Table) comprise 79 percent of community hospital discharges in the United States. The *Resource Guide* explains how to use the Prevention Quality indicator rates and their standard errors to analyze a State's standing, to create graphics for a State, and to test for differences between a State rate and the best-decile or the national average. Those tests ensure that policymakers will focus on differences that likely reflect health system problems and not on differences that occur because of data weaknesses.

How To Use the *Resource Guide*

Diabetes Care Quality Improvement: A Resource Guide for State Action provides detailed guidance on how to interpret and evaluate measures and explains the importance of using data and measurement to begin a quality improvement program, to track progress, and to influence continuous improvement. Key actions to take to make change happen include:

- Sharing information with quality improvement leaders in your State to understand what the data mean, how they might relate to health care practices in your State, and what to do to change behavior that improves the care your citizens receive.
- Examining your State's position across multiple indicators of diabetes care quality; most States are high on some measures and low on others.
- Aiming to move your State into the best-in-class of States (or to the best-decile average) rather than aiming for the national average.

For More Information

The *Resource Guide* and *Workbook* are available at www.ahrq.gov/qual/diabqguide.doc and www.ahrq.gov/qual/diabqwork.doc, respectively. Printed copies may be requested by calling the AHRQ Publications Clearinghouse at 800-358-9295 or by email at ahrqpubs@ahrq.gov.

AHRQ released another diabetes-related resource in January 2005. HCUP Highlight 1, *Economic and Health Costs of Diabetes*, reveals that about two-thirds of the \$2.5 billion in hospitalization costs that could be saved annually with better diabetes care could accrue to Medicare and Medicaid. HCUP Highlight 1 can be found at www.ahrq.gov/data/hcup/highlight1/high1.htm.

More information on AHRQ and its programs and activities is available at www.ahrq.gov

Table. Avoidable admissions for diabetes (excluding obstetric and neonatal admissions and transfers from other institutions) per 100,000 population age 18 years and older, by severity and State, 2001

State	Admissions for diabetes without complications ^a		Admissions for diabetes with short-term complications ^a		Admissions for diabetes with long-term complications ^a		Lower extremity amputations ^a among patients with diabetes	
	Adjusted rate ^b	Standard error	Adjusted rate ^b	Standard error	Adjusted rate ^b	Standard error	Adjusted rate ^b	Standard error
United States	26.822	1.161	52.367	1.314	117.098	2.532	38.724	1.044
Best decile	5.797	0.349	31.886	0.810	66.367	0.882	22.186	0.557
Arizona	11.724	0.552	50.215	1.154	112.620	1.682	28.243	0.840
California	16.981	0.266	42.683	0.415	102.283	0.656	31.968	0.369
Colorado	5.798	0.446	40.347	1.127	75.363	1.558	23.389	0.871
Florida	31.295	0.489	51.915	0.668	104.526	0.859	33.100	0.471
Georgia	31.945	0.746	70.393	1.078	118.547	1.437	49.046	0.937
Hawaii	9.204	1.001	28.956	1.803	94.807	3.197	42.482	2.130
Illinois	40.807	0.656	47.147	0.715	117.150	1.107	35.397	0.609
Iowa	15.891	0.842	39.285	1.372	93.180	2.013	27.526	1.077
Kansas ^c	36.452	1.445	50.887	1.724	113.395	2.504	27.393	1.197
Kentucky	36.548	1.138	64.081	1.553	128.038	2.078	39.443	1.147
Maine	10.693	1.032	39.892	2.060	104.357	3.197	41.416	2.001
Maryland	19.883	0.704	51.091	1.131	104.892	1.622	43.048	1.047
Massachusetts	10.981	0.468	39.611	0.906	103.596	1.430	41.050	0.901
Michigan	17.454	0.484	60.363	0.906	108.623	1.198	37.013	0.698
Minnesota	12.228	0.656	32.736	1.063	93.903	1.781	24.513	0.910
Missouri	24.268	0.780	58.131	1.254	117.393	1.701	37.011	0.944
Nebraska	14.298	1.125	31.573	1.681	72.133	2.430	25.770	1.393
New Jersey	32.420	0.696	53.358	0.919	140.081	1.425	40.752	0.767
New York	37.245	0.502	49.973	0.594	134.241	0.943	39.352	0.511
North Carolina	25.259	0.669	63.418	1.049	121.154	1.419	47.339	0.884
Oregon	8.131	0.550	37.158	1.214	68.093	1.585	22.067	0.889
Pennsylvania	24.398	0.502	55.110	0.784	124.370	1.104	47.088	0.672
Rhode Island	13.932	1.273	45.901	2.387	110.239	3.562	35.569	2.006
South Carolina	38.957	1.371	71.394	1.723	157.310	2.418	60.545	1.427
Tennessee	33.819	0.877	64.444	1.233	120.911	1.641	43.841	0.983
Texas	30.699	0.780	55.555	0.789	146.609	1.297	54.059	0.799
Utah	5.369	0.622	39.749	1.634	67.975	2.254	19.748	1.225
Vermont	7.161	1.249	35.297	2.779	75.042	4.019	29.017	2.499
Virginia	19.605	0.607	52.215	0.982	113.897	1.462	41.989	0.896
Washington	8.003	0.424	38.857	0.943	64.822	1.199	24.551	0.737
West Virginia	33.928	1.519	70.456	2.335	154.406	3.190	38.505	1.579
Wisconsin	14.026	0.583	41.999	1.027	92.844	1.483	35.901	0.916

^aKey: Without complications = without short-term or long-term complications. With short-term complications = with ketoacidosis, hyperosmolarity, or coma. With long-term complications = with renal, eye, neurological, circulatory, or other unspecified complications. Lower extremity amputations exclude trauma-related admissions.

^bRates are adjusted by age and gender, using the total U.S. population for 2000 as the standard population.

^cRates biased upward because data element was not available to exclude transfers.

Note: Not all States participate in the Healthcare Cost and Utilization Project.

Source: Agency for Healthcare Research and Quality, Healthcare Cost and Utilization Project, Nationwide Inpatient Sample (for United States rate) and State Inpatient Databases (for State rates).

HCUP Partners Who Contributed Data to the 2004 National Healthcare Quality Report

Arizona	Arizona Department of Health Services
California	Office of Statewide Health Planning and Development
Colorado	Colorado Health and Hospital Association
Florida	Florida Agency for Health Care Administration
Georgia	GHA: An Association of Hospitals and Health Systems
Hawaii	Hawaii Health Information Corporation
Illinois	Illinois Department of Public Health
Iowa	Iowa Hospital Association
Kansas	Kansas Hospital Association
Kentucky	Kentucky Department for Public Health
Maine	Maine Health Data Organization
Maryland	Maryland Health Services Cost Review Commission
Massachusetts	Massachusetts Division of Health Care Finance and Policy
Michigan	Michigan Health and Hospital Association
Minnesota	Minnesota Hospital Association
Missouri	Hospital Industry Data Institute
Nebraska	Nebraska Hospital Association
New Jersey	New Jersey Department of Health and Senior Services
New York	New York State Department of Health
North Carolina	North Carolina Department of Health and Human Services
Oregon	Oregon Association of Hospitals and Health Systems
Pennsylvania	Pennsylvania Health Care Cost Containment Council
Rhode Island	Rhode Island Department of Health
South Carolina	South Carolina State Budget and Control Board
Tennessee	Tennessee Hospital Association
Texas	Texas Department of State Health Services
Utah	Utah Department of Health
Vermont	Vermont Association of Hospitals and Health Systems
Virginia	Virginia Health Information
Washington	Washington State Department of Health
West Virginia	West Virginia Health Care Authority
Wisconsin	Wisconsin Department of Health and Family Services