

**Methods for the Dartmouth Atlas of Health Care Report:**

*Disparities in Health and Health Care among Medicare Beneficiaries*

**prepared for**

**The Robert Wood Johnson Foundation Aligning Forces for Quality program**

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For more information, visit <http://www.dartmouthatlas.org/af4q.shtm>

***Document description:***

This technical document provides a description of the methods used for the *Dartmouth Atlas Report, Disparities in Health and Health Care among Medicare Beneficiaries* and the accompanying measures.

The document is divided into three sections. In the first section, descriptions of each measure are provided, including the numerators and denominators. The second section presents maps of Dartmouth Atlas definitions of the Aligning Forces for Quality regions. Atlas regions used in this report are defined through linking AF4Q regions with ZIP Codes. A table is also included that demonstrates very similar population counts for the AF4Q and the Atlas regions. The third section provides a formal description of the methods used to calculate confidence intervals.

Other resources can be found at <http://www.dartmouthatlas.org/af4q.shtm>. These include Frequently Asked Questions and the eight measures, with their corresponding confidence intervals.

***A word about the precision of Atlas measures:*** The Atlas team has taken care to prepare measures of reasonable precision and to provide the necessary supporting information that allows users to judge the likely importance of differences in rates and proportions.

The denominators differ widely, depending on the measure and the region. For some measures (e.g. ambulatory care-sensitive condition discharges), the entire fee-for-service Medicare population is the denominator. For other indicators, such as those for diabetics, the denominators are obviously much smaller. Stratification by race leads to especially small denominators in some regions. To prevent misinterpretation of the significance of differences in rates and proportions, we have suppressed any measure with a denominator of less than 200.

Even with this suppression, a rate that differs across regions or race cannot be assumed to be statistically significant or clinically important. Confidence intervals (95%) are provided at <http://www.dartmouthatlas.org/af4q.shtm> to guide users' interpretation. Although these are not formal inferential tests, non-overlapping confidence intervals generally mean that it is unlikely that the differences occurred by chance. The reader must be cautious in making multiple comparisons where differences may be found even if occurring by chance.

It is equally important to interpret the clinical or policy significance of differences. If an observed difference in rates is not important (particularly when including the range of the confidence intervals), then a statistical test of the difference is moot.

<b>Measure:</b>	<b>Ambulatory care sensitive condition discharge rate</b>
Last revised:	Redocumented 5/22/08
Faculty:	Goodman
Statistical analyst/programmer:	Steph
Description:	Ambulatory care sensitive condition discharge rate. Note this uses the Dartmouth Atlas definition and may differ from other commonly used definitions.
Time period:	2003 - 2005 average
Population:	Medicare, non-HMO, age 65 - 99 (mid-year), 100% sample
Event:	
Any of the following	Primary diagnosis
A01 Convulsions	780.3x
A02 COPD	491xx, 492xx, 494xx, 496xx, 466.0x 466.0x only w/2nd dx 491xx, 492xx, 494xx, 496xx
A03 Pneumonia	481xx, 482.2x, 482.3x, 482.9x, 483xx, 485xx, 486xx Excl. 2nd dx 282.6x
A04 Asthma	493xx
A05 CHF	428xx, 402.01, 402.11, 402.91, 518.4x Excl. sx 36.01, 36.02, 36.05, 36.1x, 37.5x, or 37.7x
A06 Hypertension	401.0x, 401.9x, 402.00, 402.10, 402.90 Excl. sx 36.01, 36.02, 36.05, 36.1x, 37.5x, or 37.7x
A07 Angina	411.1x, 411.8x, 413xx Excl. sx 01-86.99
A08 Cellulitis	681xx, 682xx, 683xx, 686xx Excl. sx 01-86.99, except if 86.0x is the only and first sx
A09 Diabetes	250.0x, 250.1x, 250.2x, 250.3x, 250.8x, 250.9x
A10 Gastroent.	558.9x
A11 Kidney/Urinary	590xx, 599.0x, 599.9x
A12 Dehydration	276.5x
Rates:	Overall, blacks, and non-blacks
Adjustment:	Age, sex, race indirect adjustment
Geographies:	States, AF4Q, HRRs