



The relative utilization of newer AEDs in North Carolina is above average, but access to neurologists is only average^{1,2}

STATE

ADULT EPILEPSY POPULATION³

STATE RECOMMENDATION

North Carolina

85,926

To help raise the standard of epilepsy care, North Carolina] should improve access to neurologists and improve access to newer AEDs

GRADE⁴

LEGEND

1 Relative utilization of newer AEDs

North Carolina is above average for ratio of newer AED use; efforts to educate physicians and strengthen formulary access may help further improve grade

B

State rank

A 1-6

B 7-16

C 17-34

D 35-44

F 45-50

2 Access to neurologists

Access to a neurologist among epilepsy patients in North Carolina is average among all states; investment in physician training programs and ensuring insurance coverage of specialists may help improve grade

C

Steps states can take to remove barriers to care:

Protect and improve access to newer AEDs by:

- Limiting the use of "fail first" policies (e.g. prior authorization and step therapy), and substitution requirements that prolong ineffective treatment
- Limiting high cost-sharing policies (e.g. co-pays and deductibles) that can make AEDs unaffordable

Protect and improve access to neurologists for epilepsy care by:

- Ensuring timely access to neurologists, especially in plans with narrow provider networks
- Establishing and supporting specialized epilepsy centers – within North Carolina there are 8 specialized epilepsy centers recognized by the National Association of Epilepsy Centers (NAEC)⁵

1. Newer AEDs are defined as those that were introduced after 1993.

2. AED: anti-epilepsy drug

3. Epilepsy population counts at state level represent adults ≥18 years of age and were generated using data from the CDC (<http://stacks.cdc.gov/view/cdc/7016/Share>. Accessed August 12, 2014.)

4. State letter grade based on persons ≥ 12 years of age included in an analysis funded by UCB, Inc. using IMS Health LifeLink™ and Xponent™ data (Accessed January, 2012).

5. Number of specialized epilepsy centers were taken from the NAEC website: <http://www.naeclocator.org/locator/resultsall.asp>. Accessed May 8, 2015.

About the Scorecards

Background

As leaders in epilepsy, UCB and the Epilepsy Foundation collaborated to study factors related to improving seizure control and reducing hospitalizations. The collaboration resulted in data published in the journal *Epilepsy & Behavior*,* which showed that several factors, including use of newer anti-epilepsy drugs and access to specialty care, were associated with improved patient outcomes. Based on the published data, the Epilepsy Foundation released state-by-state scorecards that assess each state's utilization of newer AEDs and the availability of specialty care from a neurologist in comparison to other states. These metrics were determined by such factors as favorability of managed care coverage and proximity of the state's population to a member center of the NAEC. The scorecards are intended to identify potential barriers to optimal epilepsy care and opportunities for improvement no matter what grades are received. The scorecards are available on the Epilepsy Foundation's website at www.epilepsy.com/scorecards.

Driver Selection

Demographic, healthcare utilization, prescription, therapy, and access metrics associated with epilepsy outcomes were selected for analysis with single-measurement and multivariate models. In both analyses, two metrics demonstrated high correlation with improved epilepsy outcomes:

- Relative utilization of newer AEDs
- Access to neurologist

Methodology for Driver Analysis

Hypothesis-based single-measurement testing was used to identify variables correlating with desirable epilepsy outcomes, identified by a decrease in hospitalization rate. Metrics demonstrating desirable outcomes were selected for a multivariate survival analysis (consistent with clinical trial analysis and publication standards). Each variable's impact on epilepsy outcomes was measured while controlling for the "interactive effects" of other variables.

Key Limitations

Some state-specific conditions in treating epilepsy patients are not captured in the databases analyzed. Specifically, geographic identifiers were not available for the Medicaid population. Additionally, severity measures were not available for the state populations. Scorecards capture a snapshot in time, and length of database history did not allow for trending. As such, recent patterns of change which could impact epilepsy outcomes may not be reflected.

* Faught E, et al. Newer antiepileptic drug use and other factors decreasing hospital encounters. *Epilepsy Behav* 2015;45:169-175.