



## Cognitive Behavioral Therapy (CBT) in Adult ADHD

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ADHD in adults is no longer a controversial diagnosis. Reported in multiple studies since 1988, adult ADHD causes functional impairment, problems with employment, education, economic and social functioning. It is estimated that the prevalence of adult ADHD in the general population is 1-5% and that impairing ADHD symptoms persist in 30-80% of adults who had ADHD in childhood.

Until recently, only pharmacological approaches have been studied rigorously. Yet 20-50% of adults are considered non-responders due to insufficient symptom reduction or inability to tolerate the medications. More importantly, those adults who are responders show a reduction in only 50% of core symptoms of ADHD. Guidelines exist for providing psychotherapy for adults with ADHD, yet only one study, which has investigated the potential efficacy of such psychosocial interventions, has shown that CBT plus psychopharmacology yields better overall results than either psychopharmacology or CBT alone. In this study, Safren et al, reason that while psychopharmacology may ameliorate many of the core symptoms of ADHD (attentional problems, high activity, impulsivity), medication alone does not provide the patient concrete strategies and skills for coping with functional impairments. Functional impairment includes underachieve-

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## Where Can I Find Information About Nebraska Medicaid's Drug Coverage?

Useful information can be found at Nebraska Medicaid's website: [www.hhs.state.ne.us/med/pharm/](http://www.hhs.state.ne.us/med/pharm/). To see if a drug is covered, see the "Covered Drugs Listing." Click on the link to read and print the *Prior Authorization Criteria and Forms*. Provider Bulletins are archived and can be retrieved from this page as well.

## Resisting the Progression of Antimicrobial Resistance

Written by Rachel Burke, UNMC PharmD Candidate

Antimicrobial resistance is among the most challenging problems concerning clinical medicine today. The extensive use of antimicrobials has contributed to drug resistance. Appropriate use of antimicrobials is prescribing antimicrobial therapy only when beneficial to the patient which targets the suspected pathogens. Therapy must be the appropriate drug, dose, and duration. When antimicrobials are used, the selective pressure exerted by the drug favors the growth of organisms that are susceptible to the drug's action. This article promotes awareness of antimicrobial use and resistance in Nebraska communities with the ultimate goal of decreasing antimicrobial resistance and avoiding treatment failures.<sup>1</sup>

The Nebraska Department of Health and Human Services collected data on a yearly basis concerning this topic as part of a project called Antimicrobial Resistance Surveillance. Throughout the regions of Nebraska, 48.9% of the cases of *S. aureus* are considered methicillin-resistant according to the data from 2006, which is an increase from 33.6% in 2001. The rate of penicillin-resistant *S. pneumoniae* has been relatively steady from 2001-2006 according to the data (20.6% in 2004 and 23.8% in 2006). Penicillin-resistant *S. pneumoniae* reached 30% in Lancaster County in 2006. The presence of penicillin-intermediate *S. pneumoniae* is the highest in Douglas County with 24.6% of isolates in 2006. The highest rate of vancomycin-resistant Enterococci in 2006 is in Douglas County at 11%, which has

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increased from 2.5% in 2001 and has actually decreased from 12.2% in 2004. It is important to note that the results of this collection are only indicative of infections that were both cultured and reported.<sup>2</sup>

The Nebraska Drug Utilization Review Board reviewed antimicrobial use in the state of Nebraska among Medicaid patients over a one year time period from October 1, 2006 to September 30, 2007. Profiles of approximately 200,000 patients were reviewed. Antimicrobials issued to patients included ampicillins, third generation cephalosporins, azithromycin, penicillin combinations, and quinolones. Patients that were excluded from the data were HIV, nursing home, and Medicare Part D dual eligibility patients. There were 20,685 patients identified who had 3-10 antimicrobial prescriptions filled in the one year time frame. This number represents over 10% of the 200,000 patients that were considered. Of the claims, 13,963 (68%) were filled for patients 0-13 years old, and 6,722 (32%) were filled for patients 14 years old and older. Table 1 shows the breakdown of the 20,685 claims.<sup>3</sup>

Number of Antimicrobial Prescriptions	Number of Patients	Total Number of Claims
10	190	1,900
9	356	3,204
8	556	4,448
7	976	6,832
6	1,653	9,918
5	3,031	15,155
4	5,442	21,768
3	8,479	25,437

Prescriber data was also included in the project for the same one year time period from October 1, 2006 to September 30, 2007. A total of 3,594 Nebraska providers prescribed antimicrobials for this patient population, and most providers prescribed between 0-50 antimicrobials over the one year period. The highest total for one single prescriber is 1,136. Table 2 shows the prescriber results.<sup>3</sup>

The consequences of antimicrobial resistance are significant. Patients affected with pathogens that are drug resistant are more likely to be hospitalized, require longer hospital stays, and have

TABLE 2. Prescriber Results

Number of Antimicrobials Prescribed	Number of Prescribers
0 - 49	3,076
50 - 99	294
100 - 199	159
200 - 299	40
300 - 399	14
400 - 499	2
500 - 999	2
> 1,000	2

a poor prognosis. As part of prevention and control of antimicrobial resistance, measures to prevent infection transmission are very important. These measures include appropriate vaccinations, proper sanitation, and basic good hygiene. The solution to the problem of antimicrobial resistance is not necessarily reducing the use of antimicrobials, because these drugs can be valuable when used appropriately. Instead, overuse and misuse must be decreased in order to combat antimicrobial resistance.<sup>1,4</sup>

References

- Centers for Disease Control and Prevention. A Public Health Action Plan to Combat Antimicrobial Resistance. <<http://www.cdc.gov/drugresistance/actionplan/aractionplan.pdf>> accessed December 2007.
- Nebraska Health and Human Services System. Nebraska ARS Summary Reports 2004, 2006. <<http://www.dhhs.ne.gov/ars/index.htm#ARS>> accessed December 2007.
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Top 10 Medicaid Drugs By Amount Paid <sup>1</sup>					
Rank	Drug Name	Amount Paid	Rank	Drug Name	Amount Paid
1	Abilify 5 mg Tablet	\$2,398,851	6	Novoseven 4,800 mcg Vial	\$1,520,345
2	Abilify 10 mg Tablet	\$1,921,334	7	Risperdal 1 mg Tablet	\$1,519,123
3	Prilosec OTC 20 mg Tablet	\$1,627,419	8	Singulair 5 mg Tablet Chewable	\$1,404,374
4	Seroquel 200 mg Tablet	\$1,580,864	9	Advair 250/50 Diskus	\$1,386,533
5	Singulair 10 mg Tablet	\$1,575,790	10	Lexapro 20 mg Tablet	\$1,352,637

<sup>1</sup>As reported by ACS October 1, 2006 - September 30, 2007

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ment, daily organizational and administrative goals (bills, mail, hassles), weekly work or school related tasks, and relationship difficulties. These require active problem-solving, which can be achieved with skills training over and above medication management. CBT plus psychopharmacology provide a better level of functioning than either alone.

The study group comprised medicated adults with ADHD who received cognitive-based therapy involving (1) organization and planning, (2) coping with distractibility, and (3) cognitive restructuring. Optional characteristics were (1) procrastination, (2) anger management, and (3) communication skills. A second group received continued psychopharmacology alone. The DSM-IV criteria for adult ADHD were used: (1) full DSM-IV criteria by the age of 7 (with documented external validation) as well as concurrently, (2) description of a chronic course of ADHD symptoms from childhood until adulthood, and (3) endorsement of a moderate or severe level of impairment attributable to the ADHD symptoms. Assessment was performed by a diagnostic evaluation and independent evaluation (IE) by an assessor blinded to treatment assignment, and a battery of self-report measures.

Those ADHD adults who received CBT had lower IE-rated ADHD symptoms and global severity, as well as self-reported ADHD symptoms than those who had continued psychopharmacology alone. Those in the CBT group also had lower IE-rated and self-reported anxiety, lower IE-rated depression, and a trend to have lower self-reported depression. Treatment responders in the CBT group increased to 56% compared to those who did not receive CBT (13%). The authors concluded that CBT for adults with ADHD who have “residual symptoms is a feasible, acceptable, and potentially efficacious next-step treatment approach.”\*

\*Safren, Steven A., Otto, Michael W., Sprich, Susan, Winett, Carol L., Wilens, Timothy E., and Biederman, Joseph *Cognitive-behavioral Therapy for ADHD in medication-treated adults with continued symptoms, Behavior Research and Therapy* 43 (2005) 831-842

**Reduce Mailing Costs**

This newsletter is available electronically. In order to receive this information faster, please send us your email address or fax number. If you are receiving duplicate mailings or wish to be removed from our mailing list, please contact us by phone (402) 420-1500 or by email [dur@npharm.org](mailto:dur@npharm.org).

**Optimizing Doses for Significant Cost Savings**

Dose optimization offers providers a cost savings opportunity without compromising patient care. Dose optimization refers to identifying patients who are receiving multiple tablets or capsules of a lower strength and consolidating the regimen to an equivalent dosage of the same medication in a more cost effective manner. This practice can significantly reduce costs primarily with medications which are taken once a day, available in multiple strengths and are priced nearly the same. See the cost comparison table for Concerta, Effexor XR and Zyprexa.

COST COMPARISON			
Drug Name and Strength	Dosage	Daily Cost*	Annual Cost
Concerta 18mg	3 Tablets Daily	\$11.91	\$4,287.60
Concerta 27mg	2 Tablets Daily	\$ 7.36	\$2,649.60
Concerta 54mg	1 Tablet Daily	\$ 4.88	\$1,756.80
Effexor XR 75mg	2 Capsules Daily	\$ 7.60	\$2,736.00
Effexor XR 150mg	1 Capsule Daily	\$ 4.12	\$1,483.20
Zyprexa 5mg	3 Tablets Daily	\$22.80	\$8,208.00
Zyprexa 7.5mg	2 Tablets Daily	\$18.48	\$6,652.80
Zyprexa 15mg	1 Tablet Daily	\$17.17	\$6,181.20

\*Medicaid rate of pharmacy reimbursement for drug cost only as reported by ACS, 12/06/2007.



## The Cost of Treating Type II Diabetics

*Written by Tai Burlison, UNMC PharmD Candidate*

Medications used for Type II diabetes management can be very patient specific and costly. With a variety of options available at variable costs, the 2007 Diabetes Treatment Guidelines, recommended by the American Diabetes Association, should be used when initiating and maintaining therapy. Table 1 illustrates the average monthly cost of treating Medicaid patients with diabetes at different stages of therapy.

While patient care is the most important goal, physicians and pharmacists can be effective in appropriately monitoring patients' therapy and choosing cost effective medication options. The 2007 ADA guidelines can be extremely beneficial in helping health care professionals and patients make these decisions.

TABLE 1.

Stage In Therapy	Option #1	Option #2	Option #3
1st Line	Metformin \$13.44		
2nd Line	Metformin \$13.44 + Sulfonylurea \$17.83 =\$31.27	Metformin \$13.44 + Insulin \$142.60 =\$156.04	Metformin \$13.44 + Glitazone \$158.59 =\$172.03
3rd Line	Metformin \$13.44 + Sulfonylurea \$17.83 + Insulin \$142.60 =\$173.87	Metformin \$13.44 + Sulfonylurea \$17.83 + Glitazone \$158.59 =\$189.86	Metformin \$13.44 + Glitazone \$158.59 + Insulin \$142.60 =\$314.63
The average monthly costs of medications not included in the 2007 ADA Guidelines are as follows: Byetta \$210.38 Januvia \$162.92 Precose \$99.34 Symlin \$219.03			