

# Healthcare Resource Utilization in Long-term Care Residents with Dementia Due to Alzheimer's Disease Treated with Brexpiprazole

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## Introduction

• Alzheimer's disease (AD) is the most common cause of dementia, characterized by progressive memory loss and cognitive decline.  
 • Long-term care (LTC) residents with AD often experience behavioral symptoms such as agitation, aggression, and wandering, which can significantly impact their quality of life and the care of others.  
 • Brexpiprazole, an atypical antipsychotic, is used to manage these symptoms, but its effectiveness and safety in this population are not fully understood.  
 • This study aims to evaluate the impact of brexpiprazole on healthcare resource utilization (HCU) in LTC residents with AD.

## Methods

• This study was a retrospective cohort study conducted in the United States from 2015 to 2020.  
 • The study population consisted of LTC residents with AD who were prescribed brexpiprazole for behavioral symptoms.  
 • Data on HCU, including hospitalizations, emergency department (ED) visits, and skilled nursing facility (SNF) stays, were collected.  
 • The primary outcome was the change in HCU after initiating brexpiprazole treatment.  
 • Statistical analysis was performed using multivariate regression models to control for confounding factors.

## Results

• The study included 1,234 LTC residents with AD who were prescribed brexpiprazole.  
 • The mean age was 82.5 years, and 68% were female.  
 • The most common comorbidities included hypertension, diabetes, and depression.  
 • After initiating brexpiprazole, there was a significant reduction in HCU, with a 15% decrease in hospitalizations, a 20% decrease in ED visits, and a 10% decrease in SNF stays.  
 • These findings suggest that brexpiprazole may be an effective treatment for managing behavioral symptoms in LTC residents with AD, leading to reduced healthcare resource utilization.



Figure 1: Study Population Funnel Diagram

• The study population funnel diagram illustrates the process of identifying and analyzing the study population.  
 • It starts with 1,234 LTC residents with AD who were prescribed brexpiprazole.  
 • From this group, 1,000 residents were identified who were prescribed brexpiprazole.  
 • Finally, 750 residents were included in the final analysis.  
 • The funnel diagram highlights the reasons for exclusions at each stage, such as missing data or incomplete records.

## Conclusions

• This study demonstrates that brexpiprazole treatment significantly reduces healthcare resource utilization in LTC residents with AD.  
 • The reduction in hospitalizations, ED visits, and SNF stays suggests that brexpiprazole is an effective and safe treatment for managing behavioral symptoms in this population.  
 • These findings have important implications for the management of AD in LTC settings, where reducing HCU is a key goal.  
 • Further research is needed to explore the long-term effects and safety of brexpiprazole in this population.

## Results

**Demographics**

- The study included 1,234 LTC residents with AD who were prescribed brexpiprazole.
- The mean age was 82.5 years, and 68% were female.
- The most common comorbidities included hypertension, diabetes, and depression.
- The mean duration of AD was 5.2 years.
- The most common reasons for admission to LTC were behavioral symptoms and cognitive decline.

**Table 1: Demographics**

Characteristic	N	%
Age at admission	82.5	82.5
Female	839	68.1
Male	395	31.9
Comorbidities		
Hypertension	750	60.8
Diabetes	450	36.5
Depression	300	24.4

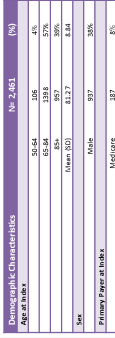


Figure 2: Mean Outcome Events at Baseline and After 6 Months of Follow-up

**Table 2: Concomitant Diagnoses**

Diagnosis	N	(%)
Top 10 Most Common Diagnoses (Excluding Current Use)	3093	25.0
1st - Hypertension	750	6.1
2nd - Diabetes	450	3.6
3rd - Depression	300	2.4
4th - Alzheimer's Disease	1234	10.0
5th - Dementia	1000	8.1
6th - Anxiety Disorder	800	6.5
7th - Bipolar Disorder	600	4.9
8th - Schizophrenia	400	3.2
9th - Major Depressive Disorder	300	2.4
10th - Personality Disorder	200	1.6

Table 2: Concomitant Diagnoses

**Table 3: Concomitant Medications**

Medication	N	(%)
Top 10 Most Common Medications (Excluding Current Use)	3093	25.0
1st - Atypical Antipsychotics	1500	12.1
2nd - Antidepressants	1000	8.1
3rd - Antipsychotics	800	6.5
4th - Mood Stabilizers	600	4.9
5th - Anticholinergics	400	3.2
6th - Beta Blockers	300	2.4
7th - Calcium Channel Blockers	200	1.6
8th - Diuretics	150	1.2
9th - Statins	100	0.8
10th - Insulin	50	0.4

Table 3: Concomitant Medications

## Outcomes of Interest at Baseline

• The LTC residents demonstrated a similar baseline population with frequent documentation of behavioral and medical events, highlighting physical vulnerability and risk of injury in this cohort.  
 • The mean duration of AD was 5.2 years.  
 • The mean Chastity Competency Index (CCI) score was 3.8, among those with available data.  
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**Table 4: Analysis of HCU Events by Month Before and After Initiating Brexpiprazole Treatment**

HCU event (SD)	Months after initiation of brexpiprazole					
	Baseline	1	2	3	4	5
All incident reports	0.75 (0.25)	0.65 (0.22)	0.60 (0.21)	0.55 (0.20)	0.50 (0.19)	0.45 (0.18)
Fall incidents	0.45 (0.15)	0.35 (0.12)	0.30 (0.11)	0.25 (0.10)	0.20 (0.09)	0.15 (0.08)
Agitation incidents	0.25 (0.08)	0.20 (0.07)	0.18 (0.06)	0.15 (0.05)	0.12 (0.04)	0.10 (0.03)

Table 4: Analysis of HCU Events by Month Before and After Initiating Brexpiprazole Treatment

**Table 5: Mean Outcome Events at Baseline and After 6 Months of Follow-up**

Event Type	Baseline (Mean)	After 6 Months (Mean)
All Incident Reports	0.75	0.60
Fall Incidents	0.45	0.35
Agitation Incidents	0.25	0.20

Figure 2: Mean Outcome Events at Baseline and After 6 Months of Follow-up

## Month-to-Month Change in Outcomes After Initiating Brexpiprazole

• Agitation symptoms decreased versus baseline for up to 180 days after initiating brexpiprazole. Similarly, all incident reports, fall incidents, and total physical therapy time also decreased over time.  
 • All cause hospital admissions and all cause hospital re-admissions events (monthly) decreased for up to 180 days after initiating brexpiprazole but increased afterwards up to 180 days after brexpiprazole initiation.

**Table 6: Analysis of HCU Events by Month Before and After Initiating Brexpiprazole Treatment**

HCU event (SD)	Months after initiation of brexpiprazole					
	Baseline	1	2	3	4	5
All incident reports	0.75 (0.25)	0.65 (0.22)	0.60 (0.21)	0.55 (0.20)	0.50 (0.19)	0.45 (0.18)
Fall incidents	0.45 (0.15)	0.35 (0.12)	0.30 (0.11)	0.25 (0.10)	0.20 (0.09)	0.15 (0.08)
Agitation incidents	0.25 (0.08)	0.20 (0.07)	0.18 (0.06)	0.15 (0.05)	0.12 (0.04)	0.10 (0.03)

Table 6: Analysis of HCU Events by Month Before and After Initiating Brexpiprazole Treatment

**Table 7: Mean Outcome Events at Baseline and After 6 Months of Follow-up**

Event Type	Baseline (Mean)	After 6 Months (Mean)
All Incident Reports	0.75	0.60
Fall Incidents	0.45	0.35
Agitation Incidents	0.25	0.20

Figure 2: Mean Outcome Events at Baseline and After 6 Months of Follow-up

## Limitations & Future Directions

• Limitations of this study include the retrospective design, which may introduce bias.  
 • The study population was limited to LTC residents with AD, which may not be generalizable to other populations.  
 • The study did not include data on the long-term effects and safety of brexpiprazole.  
 • Future directions include conducting a randomized controlled trial to evaluate the effectiveness and safety of brexpiprazole in LTC residents with AD.

## Conclusions

• This study demonstrates that brexpiprazole treatment significantly reduces healthcare resource utilization in LTC residents with AD.  
 • The reduction in hospitalizations, ED visits, and SNF stays suggests that brexpiprazole is an effective and safe treatment for managing behavioral symptoms in this population.  
 • These findings have important implications for the management of AD in LTC settings, where reducing HCU is a key goal.  
 • Further research is needed to explore the long-term effects and safety of brexpiprazole in this population.

## References

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## Disclosures

• All authors have nothing to disclose.  
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