

# Relapse rates in Schizophrenic Patients Receiving Aripiprazole in Comparison to Other Atypical Antipsychotics

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# Drug treatment in the prevention of schizophrenia relapse

- Rehospitalization rates over 1 year
  - Conventional Antipsychotics 48 – 56%
  - Conventional Depot Formulations 19-31% (2 years)
  - Clozapine 13 – 27%
  - Risperidone 33%
  - Olanzapine 31%

# Aripiprazole

- Released November 2002
- Novel atypical antipsychotic
  - partial dopamine agonist
- Minimal effects on weight gain, diabetes, lipid metabolism and QTc interval

# Aripiprazole

## Acute Psychosis/Agitation Reaction

- Nine case reports or case series (n=9)
  - Increased psychosis and agitation
  - Concurrent atypical antipsychotic
  - 4 required re-hospitalization
  - 3 of the patients were already hospitalized

# Study Objective

- Compare **relapse rates** and **time to relapse** in patients with schizophrenia who switched to aripiprazole to those who switched to other atypical antipsychotics

# Methods

## Study Design

- Retrospective Cohort Study
- Study Population
  - Kansas Medicaid enrollees, 18 + years
  - Schizophrenia diagnosis (ICD-9 295.xx),
  - Switched from any antipsychotic to either aripiprazole or a second generation antipsychotic (SGA) from July 1, 2002 and June 30, 2003.

# Methods

## Data

- Data obtained from Kansas Medicaid
  - Eligibility files
    - Demographics information
  - Outpatient and Inpatient Claims
    - Diagnoses and procedure claims
  - Medication Claims
- Claims divided into two 6-month periods
  - Prior to switch
  - Post-switch

# Methods

## Data - Comorbidities

- Complied from both hospital and outpatient claims data, 6 month prior to switch
  - Psychiatric conditions
    - Substance Abuse (291.xx-292.xx; 303.xx-305.xx); Neurotic Disorders (300.xx -302.xx; 306.xx -316.xx), Depression (311), Mental Retardation (317-319)
  - Medical conditions
    - Diabetes (250.xx), Cardiovascular Disease (401.xx-405.xx; 428.xx; 410.xx-414.xx ), hyperlipidemia (272.xx), cerebrovascular diseases (430.xx-438.xx).

# Methods

## Data – Health Care Utilization

- Psychiatric related outpatient services
  - Psychotherapy and medication management
    - Current Procedure Terminology (CPT) codes 90801-90821, 90862
  - Community support
    - Healthcare Common Procedure Coding System (HCPCS) codes: Y9118, Y9119, Y9544, Y9564)
  - Case management
    - HCPCS code: Y9117
- Tabulated for 6-months prior to switch

# Methods

# Outcomes

- First psychiatric hospitalization
  - ICD -9 Codes - 290.xx-300.xx
  - Length of stay > 1 day
  - Within 6 months post switch
- Rates of relapse
  - Percent with any relapse (first episode only)
- Time to relapse
  - Days s/p switch

# Methods Analysis

- Bivariate analyses
- Multivariate analysis
  - Cox proportional hazards for Time to relapse
  - Adjusted for demographics, major comorbid conditions, and prior psychiatric-related health care use.

# Results

## Baseline Demographics

	Aripiprazole N = 444	SGA N = 521
Age (mean years $\pm$ SD)*	42.62 $\pm$ 12.9	47.1 $\pm$ 14.9
Gender – Male	199 (44.8%)	250 (48.0%)
Race – White, non-Hispanic	344 (77.5%)	416 (79.8%)

\*P < 0.05

# Results

## Baseline Comorbidities

	Aripiprazole N = 444	SGA N = 521
Psychiatric conditions		
Neurotic Disorder	218 (49.1%)	261 (50.1%)
Substance Abuse	146 (32.9%)	183 (35.1%)
Depression*	119 (26.8%)	179 (34.4%)
Medical conditions		
Cardiovascular	187 (42.1%)	230 (44.1%)
Lipid Disorder	102 (23.0%)	96 (18.4%)
Diabetes	87 (19.6%)	117 (22.5%)

\*P < 0.05

# Results

## Prior Health Care Utilization

	Aripiprazole N = 444	SGA N = 521
Mean Number of Different Medications		
Antipsychotics*	2.83 ± 0.93	2.60 ± 0.91
Antidepressants	1.10 ± 1.03	1.10 ± 1.08
Anticonvulsants	0.76 ± 0.91	0.73 ± 0.92
Prior Health Related Services (means)		
Psychiatric Hospitalization	0.40 ± 0.90	0.45 ± 0.86
Outpatient Psychiatric Visit	5.75 ± 5.91	5.31 ± 5.74
Case Management Visit*	8.14 ± 12.1	6.26 ± 11.3
Community Support Visit*	35.4 ± 58.7	23.2 ± 48.7

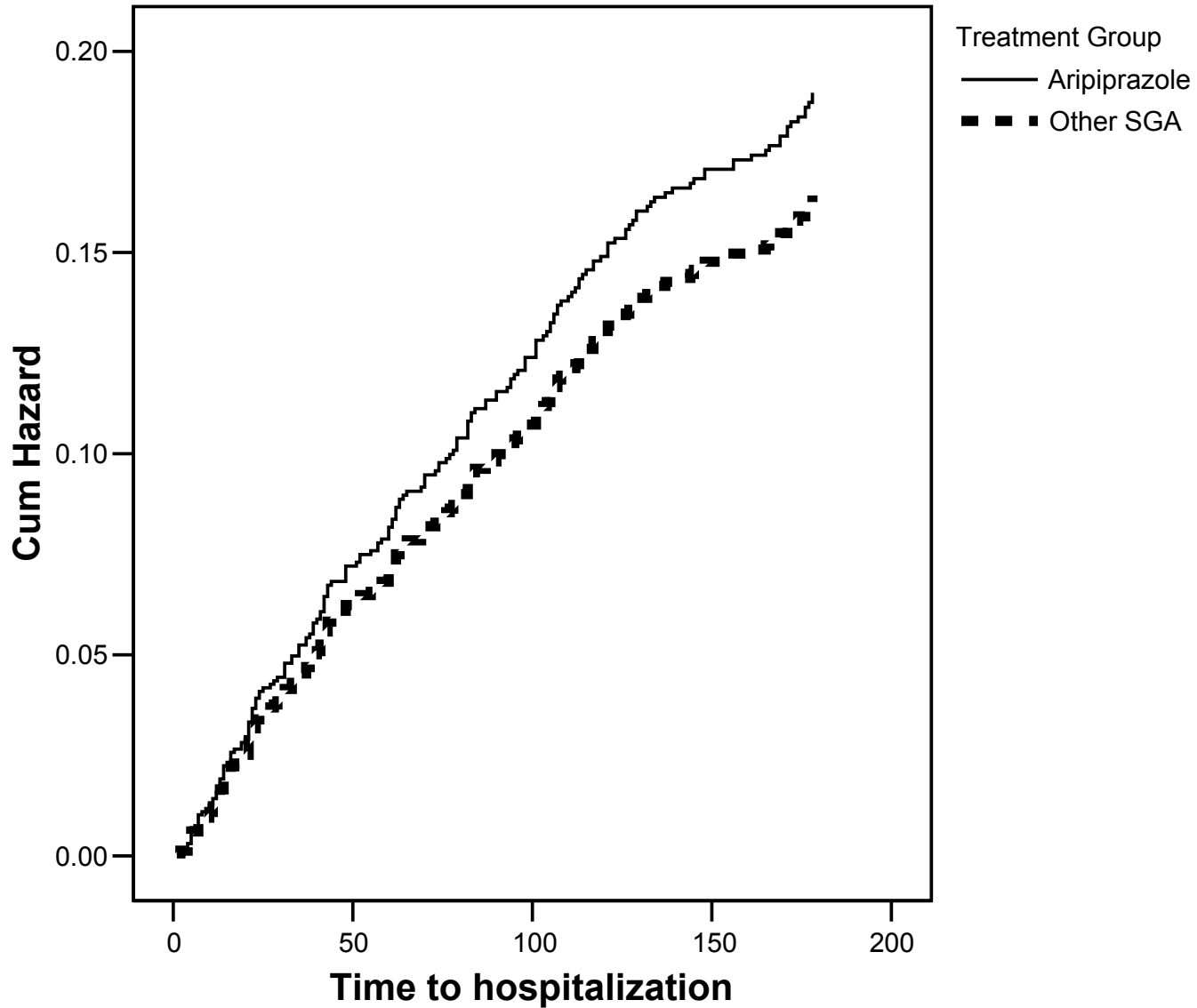
\*P < 0.05

# Results

## Relapse / Time to Relapse

- Percentage of Patients that Relapsed
  - Aripiprazole – 19.4%
  - SGA – 20.0 %
- Time to Relapse
  - Aripiprazole – 65.7 days
  - SGA – 73.8 days

**Figure 1. Hazard Function for time to hospitalization for aripiprazole versus second generation antipsychotics**



# Results

## Predictors of Relapse (Multivariable analysis)

- Significant variables
  - Depression (AHR 1.44; 95% CI 1.05-1.98)
  - Substance abuse (AHR 1.80; 95% CI 1.32-2.47)
  - Neurotic disorders (AHR 2.27; 95% CI 1.58-3.26)
  - Prior psychiatric hospitalization (AHR 1.38; 95% CI 1.22-1.55)
- Aripiprazole or SGA had NO effect on the risk of hospitalization (AHR =1.16; 95% CI 0.86-1.56)

# Limitations

- Single state Medicaid database
- Claims data - accuracy of coding
- Severity of Illness, reason for visits, and reason for discontinuation of medication is unknown

# Conclusion

- Rates of relapse and time to relapse with aripiprazole were consistent with other atypical antipsychotics in a six-month period.
- Future
  - Longer study (1 year or greater)
  - Treatment resistant schizophrenia
  - Bipolar population

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