IDENTIFYING SCHIZOPHRENIA PATIENTS AT HIGH RISK FOR ANTIPSYCHOTIC NONADHERENCE USING THE ASSESSMENT IMPROVEMENT AND QUALITY RISK EVALUATION TOOL

E. Muser1, S.L. Slabaugh2, A. Louder3, N. Patel3

1Janssen Scientific Affairs, LLC, Titusville, NJ, USA; 2Comprehensive Health Insights, Inc., Louisville, KY, USA

INTRODUCTION

Background and Rationale

- Schizophrenia is a chronic mental health disorder that is associated with high utilization of healthcare resources and costs.
- Adherence to antipsychotic medications is an important component of successful management of the disease and has been shown to decrease rates of psychiatric hospitalization.

Research Objectives

- To develop a software tool to identify patients at high risk for future antipsychotic nonadherence.
- To compare healthcare and medication costs between a high-risk cohort (identified by the QI-RE tool) and a control cohort.

Supported by Janssen Scientific Affairs, LLC. Presented at the ISPOR 18th Annual Meeting, May 18–22, 2013, New Orleans, LA, USA.

METHODS

Study Design and Cohort

- The Humana Pharmacy claims database was used to identify Medicare Advantage Prescription Drug plan members with at least 1 medical claim or an expected enrollment in a medical plan for at least 2 days, with a diagnosis of schizophrenia (International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) 295.XX, and ≥1 pharmacy claim for an antipsychotic medication during the baseline period (January 1, 2010, to December 31, 2010).

Data Analysis

- Baseline characteristics for both study cohorts were compared using chi-square tests for categorical variables and t-tests for continuous variables.
- The top risk quartile for antipsychotic nonadherence identified by the QI-RE tool (the QI-RE cohort) consisted of patients with 14-day and 28-day gap thresholds.

The Assessment for Quality Improvement and Risk Evaluation (QI-RE) is a software tool developed by Janssen Scientific Affairs, LLC, that applies published regression equations to pharmacy and medical claims to assess patients for future adherence to antipsychotics. This tool is intended to identify patients who may benefit from intervention to improve adherence.

RESULTS

Risk Distribution and Cohort Identification

- The QI-RE cohort was younger and included a higher proportion of the Black race/ethnicity category, as well as a lower proportion of patients in the Northeast and Midwest regions relative to the control cohort (Figure 1).

Table 1. Baseline Demographic Characteristics

<table>
<thead>
<tr>
<th>Measure</th>
<th>QI-RE Cohort</th>
<th>Control Cohort</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>56.2 (±12.6)</td>
<td>56.4 (±12.7)</td>
<td>0.5936</td>
</tr>
<tr>
<td>Gender</td>
<td>51.9 (2627)</td>
<td>52.2 (2565)</td>
<td>0.7532</td>
</tr>
<tr>
<td>Race/ethnicity</td>
<td>51.7 (2627)</td>
<td>48.3 (2565)</td>
<td>0.0018*</td>
</tr>
<tr>
<td>Geographic Region</td>
<td>51.3 (2620)</td>
<td>48.7 (2561)</td>
<td>0.0009*</td>
</tr>
</tbody>
</table>

Baseline Characteristics

- The QI-RE cohort was younger and included a higher proportion of the Black race/ethnicity category, as well as a lower proportion of patients in the Northeast and Midwest regions relative to the control cohort (Table 1).

Table 2. Baseline Clinical Characteristics

<table>
<thead>
<tr>
<th>Measure</th>
<th>QI-RE Cohort</th>
<th>Control Cohort</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPR of members with a gap in therapy, mean (SD)</td>
<td>0.57 (±0.23)</td>
<td>0.72 (±0.22)</td>
<td>&lt; 0.0001*</td>
</tr>
<tr>
<td>Mean antipsychotic adherence during 1-year follow-up</td>
<td>0.79 (±0.16)</td>
<td>0.88 (±0.16)</td>
<td>&lt; 0.0001*</td>
</tr>
</tbody>
</table>

Limitations

- The study used a 1-year baseline period and a 1-year follow-up period.
- Observational studies in this study may not reflect results that would be observed in a randomized controlled trial.

Table 3. Antipsychotic Adherence and Persistence During 1-Year Follow-Up

<table>
<thead>
<tr>
<th>Measure</th>
<th>QI-RE Cohort</th>
<th>Control Cohort</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean antipsychotic adherence</td>
<td>0.79 (±0.16)</td>
<td>0.88 (±0.16)</td>
<td>&lt; 0.0001*</td>
</tr>
<tr>
<td>Mean antipsychotic persistence</td>
<td>0.79 (±0.16)</td>
<td>0.88 (±0.16)</td>
<td>&lt; 0.0001*</td>
</tr>
</tbody>
</table>

Table 4. Mean healthcare costs during 1-year follow-up.

<table>
<thead>
<tr>
<th>Measure</th>
<th>QI-RE Cohort</th>
<th>Control Cohort</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Healthcare Cost</td>
<td>$120,400</td>
<td>$140,000</td>
<td>&lt; 0.05</td>
</tr>
<tr>
<td>Total Medical Cost</td>
<td>$72,000</td>
<td>$92,000</td>
<td>&lt; 0.05</td>
</tr>
<tr>
<td>Total Pharmacy Cost</td>
<td>$48,400</td>
<td>$48,000</td>
<td>&lt; 0.05</td>
</tr>
<tr>
<td>Total Pharmacy Cost/Plan Year</td>
<td>$10,000</td>
<td>$12,000</td>
<td>&lt; 0.05</td>
</tr>
<tr>
<td>Total Medical Cost/Plan Year</td>
<td>$8,000</td>
<td>$10,000</td>
<td>&lt; 0.05</td>
</tr>
<tr>
<td>Total Medical Cost/patient</td>
<td>$2,000</td>
<td>$2,000</td>
<td>&lt; 0.05</td>
</tr>
<tr>
<td>Total Pharmacy Cost/patient</td>
<td>$1,000</td>
<td>$1,000</td>
<td>&lt; 0.05</td>
</tr>
</tbody>
</table>

CONCLUSIONS

- The QI-RE cohort consisted of patients with significantly lower rates of antipsychotic nonadherence and persistence during the 1-year follow-up period relative to the control cohort, suggesting that the risk assessment tool successfully identified patients at increased risk for antipsychotic nonadherence in this Medicare Advantage population.

REFERENCES


DISCLOSURES

E. Muser is an employee of Janssen Scientific Affairs, LLC; S.L. Slabaugh, A. Louder, and N. Patel are employees of Comprehensive Health Insights, Inc. Computerized health insights was founded by Janssen Scientific Affairs, LLC, to perform this analysis.
IDENTIFYING SCHIZOPHRENIA PATIENTS AT HIGH RISK FOR ANTIPSYCHOTIC NONADHERENCE USING THE ASSESSMENT TOOL FOR QUALITY IMPROVEMENT AND RISK EVALUATION

E. Muser, \(^1\) S.L. Slabaugh, \(^2\) A. Louder, \(^3\) N. Patel\(^4\)

\(^1\)Janssen Scientific Affairs, LLC, Titusville, NJ, USA; \(^2\)Comprehensive Health Insights, Inc., Louisville, KY, USA

INTRODUCTION

Background and Rationale

- Schizophrenia is a chronic mental health disorder that is associated with high utilization of healthcare resources and negative outcomes.
- Adherence to antipsychotic medications is an important component of successful management of the disease and has been shown to decrease rates of hospitalization and thereby reducing costs.
- Health plans often use various strategies to motivate adherence, including reminders, medication management plans, and case management strategies.

Methods

- Study Design and Cohort
  - Retrospective longitudinal cohort analysis of medical and pharmacy claims data during the period
- Data Source:
  - Humana pharmacy claims database was used to identify Medicare Advantage Prescription Drug plan members with a diagnosis of schizophrenia (ICD-9-CM Code 295.30 or 295.31) and all medical claims with a Healthcare Common Procedure Coding System code for any antipsychotic or associated medication administration.

Baseline Characteristics

- The QI-RE cohort was younger and included a higher proportion of the Black race/ethnicity category, as well as a lower proportion of patients in the Northeast and Midwest regions relative to the control cohort (Table 1).

Risk Distribution and Cohort Identification

- The mean RxRisk-V Comorbidity Score was significantly higher in the control cohort than in the QI-RE cohort, and no overlap exists between the two groups.

Table 1. Baseline Demographic Characteristics

<table>
<thead>
<tr>
<th></th>
<th>QI-RE Cohort</th>
<th>Control Cohort</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>39.3 (±10.8)</td>
<td>40.3 (±10.9)</td>
<td>0.3244</td>
</tr>
<tr>
<td>Gender</td>
<td>Male: 63%</td>
<td>Male: 60%</td>
<td>0.2357</td>
</tr>
<tr>
<td>Black race</td>
<td>44%</td>
<td>30%</td>
<td>&lt;0.0001*</td>
</tr>
<tr>
<td>Northeast</td>
<td>19%</td>
<td>31%</td>
<td>&lt;0.0001*</td>
</tr>
<tr>
<td>Midwest</td>
<td>13%</td>
<td>28%</td>
<td>&lt;0.0001*</td>
</tr>
<tr>
<td>South</td>
<td>39%</td>
<td>32%</td>
<td>0.0145</td>
</tr>
<tr>
<td>Other</td>
<td>8%</td>
<td>9%</td>
<td>0.7037</td>
</tr>
<tr>
<td>Education</td>
<td>&lt;12 years</td>
<td>&lt;12 years</td>
<td>0.5289</td>
</tr>
<tr>
<td>Employment</td>
<td>75%</td>
<td>76%</td>
<td>0.5331</td>
</tr>
</tbody>
</table>

Retention and Cohort Identification

- Patients in the QI-RE cohort were significantly more likely to have a gap in pharmacy prescription fills compared to the control cohort.

Table 2. Antipsychotic Adherence and Persistence During 1-Year Follow-up

<table>
<thead>
<tr>
<th>Measure</th>
<th>QI-RE Cohort</th>
<th>Control Cohort</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adherence to antipsychotic medications</td>
<td>89%</td>
<td>78%</td>
<td>&lt;0.0001*</td>
</tr>
<tr>
<td>Persistence to antipsychotic medications</td>
<td>84%</td>
<td>72%</td>
<td>&lt;0.0001*</td>
</tr>
</tbody>
</table>

Persistence in days—14-day gap allowance, mean (SD) 119 (±69.6) 144 (±84.4) <0.0001*

Persistence in days—≥30-day gap allowance, mean (SD) 119 (±69.6) 144 (±84.4) <0.0001*

LIMITATIONS

- This retrospective study used a 1-year baseline period and a 1-year follow-up period. Observed outcomes in this study may not reflect results that would be observed during ongoing follow-up periods.
- The RxRisk-V tool includes predictive models for commercial and Medicaid populations, but not for the Medicare population.
- The RxRisk-V tool uses complex, decision-tree based models for identifying patients who are at risk for nonadherence, which may not be generalizable to other populations.

CONCLUSIONS

- The RxRisk-V tool is an effective tool for identifying patients who are at risk for nonadherence.

REFERENCES

- Sloan FL. Comprehensive Health Insights was contracted by Janssen Scientific Affairs, LLC, to perform this analysis.
- E. Muser is an employee of Janssen Scientific Affairs, LLC.
Supported by Janssen Scientific Affairs, LLC. Presented at the ISPOR 18th Annual Meeting, May 18–22, 2013, New Orleans, LA, USA.

### INTRODUCTION

#### Background and Rationale
- Schizophrenia is a chronic mental health disorder that is associated with high utilization of healthcare resources and high healthcare costs.
- Adherence to antipsychotic medications is an important component of successful management of the disease and is linked to decreased rates of psychotic relapse.

#### Health Plans' Concerns
- Health plans often use metrics such as hospitalizations or treatment nonadherence to identify patients with significant care needs or at risk of incurring high healthcare costs.

#### Aims
- To identify schizophrenia patients at high risk for antipsychotic nonadherence and persistence and to present an improved prediction model.
- To understand how differences across payer types may impact patient outcomes.
- To discuss the usefulness of a software tool called QI-RE.

#### QI-RE: A Software Tool
- QI-RE is a software tool developed by Janssen Scientific Affairs, LLC, to predict future nonadherence with antipsychotics.
- It includes predictive models for commercial and Medicaid populations, but not for the Medicare Advantage population.

#### Study Design and Cohort

#### Data Source
- The study population included 3,867 members of a commercial health plan who were diagnosed with schizophrenia during the baseline period (January 1, 2010, to December 31, 2010).

#### Outcome Measures
- The primary outcome measures were total healthcare costs, pharmacy costs, and adherence and persistence with antipsychotic medications.

#### METHODS

#### Study Design and Cohort Identification
- The follow-up period was January 1, 2011, to December 31, 2011.

#### Adherence and Persistence
- Adherence was calculated using the mPR value.
- Persistence was measured as the number of continuous days of medication supply before a gap in medication supply exceeding a prespecified duration.
- Two different gap thresholds were evaluated: 14 days and 60 days.

#### Adverse Outcomes
- Antipsychotic medication use was associated with increased healthcare costs and resource utilization.
- Antipsychotic medication use was associated with increased healthcare costs and resource utilization.

#### Statistical Analysis
- Differences in healthcare costs and resource utilization were assessed using Student’s t-test for continuous variables and the chi-square test for categorical variables.

#### RESULTS

#### Risk Distribution and Cohort Identification
- The QI-RE cohort was younger and had a higher proportion of black and female patients.
- The demographic characteristics of the study population show that, in general, a larger proportion of patients with schizophrenia were women, black, and female.

#### Table 1: Baseline Demographic Characteristics
- Table showing the baseline demographic characteristics of the study population.

#### Figure 1: Distribution of 5-year risk for antipsychotic nonadherence
- Figure showing the distribution of 5-year risk for antipsychotic nonadherence.

#### Table 2: Baseline Clinical Characteristics
- Table showing the baseline clinical characteristics of the study population.

#### Figure 2: Mean adherence score by gap threshold
- Figure showing the mean adherence score by gap threshold.

#### Table 3: Antipsychotic Adherence and Persistence During 1-Year Follow-Up Period
- Table showing the adherence and persistence data during the 1-year follow-up period.

#### Mean Persistence in the QI-RE cohort was significantly lower than in the control cohort, as measured with both 14-day and 60-day gap thresholds.

#### Conclusions
- The findings indicate that the QI-RE tool is effective in identifying patients with schizophrenia at high risk for nonadherence.
- The tool can be used to target patients for case management or other interventions.

#### LIMITATIONS
- Limited information on real-world utilization of this tool is currently available.

#### REFERENCES
- S.L. Slabaugh, A. Louder, and N. Patel are employees of Comprehensive Health Insights, Inc.
- E. Muser is an employee of Janssen Scientific Affairs, LLC.
- Sloan FL

#### ACKNOWLEDGMENTS
- The authors would like to thank Amy Aidley for providing technical assistance with this project.

#### DISCLOSURES
- E. Muser is an employee of Janssen Scientific Affairs, LLC.
Adherence and persistence during the follow-up period: QI-RE tool as being at "high risk" for future nonadherence compared with cohorts not designated as being at "high risk"

Examine rates of nonadherence to antipsychotic medications for a cohort of patients with schizophrenia identified by the QI-RE tool as being at "high risk" for future nonadherence versus cohorts identified by the QI-RE tool as being at "low risk" for future nonadherence.

METHODS

Study Design and Cohort
- Retrospective longitudinal cohort analysis of medical and pharmacy claims data from January 1, 2010, to December 31, 2011.

The Hamper pharmacy claims database was used to identify Medicare Advantage Prescription Drug plan patients with schizophrenia on an episode of hospitalization or in all medical claims for an endpoint date with a diagnosis of schizophrenia (International Classification of Disease, Ninth Revision, Clinical Modification [ICD-9-CM] 295.33) and with antipsychotic drug use during the baseline period (January 1, 2010, to December 31, 2010).

The data were then linked to a detailed demographic and clinical data and to calculate the 1-year predicted risk for nonadherence to antipsychotics using the QI-RE tool.

The QI-RE tool includes predictive models for commercial and Medicaid populations, but not for the Medicare population. This characteristic was found to be significantly more prevalent in the control cohort than in the QI-RE cohort (Table 1).

Descriptive statistics were used to compare the QI-RE cohort with the control cohort. Student’s t test was used to compare mean differences between variables. Chi-square tests were used for comparison of all categorical variables.

All analyses were conducted using SAS version 9.3 (SAS Institute Inc., Cary, NC, USA).

No adjustment was made for multiplicity.

RESULTS

Risk Distribution and Cohort Identification
- The QI-RE cohort resulted in significantly lower mean total healthcare costs (difference of $2,534; P < 0.0001) in the QI-RE cohort (Table 2).

Despite nominally higher mean total medical costs (difference of $257; P = 0.0439*), the difference in mean pharmacy costs ($6,558) was statistically significant (P < 0.0001) in the QI-RE cohort relative to the control cohort (Table 2).

The QI-RE cohort resulted in significantly lower mean total healthcare costs (difference of $2,534; P < 0.0001) in the QI-RE cohort (Table 2).

Study Outcomes During 1-Year Follow-Up Period
- Adherence was measured using medication possession ratio (MPR) as defined by the following formula: MPR = (T/90) * 100, where T is the total number of days covered.

Table 1. Baseline Demographic Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Control Cohort (n = 2,611)</th>
<th>QI-RE Cohort (n = 1,139)</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, years, mean (±SD)</td>
<td>569 (±50)</td>
<td>570 (±50)</td>
<td>0.6586</td>
</tr>
<tr>
<td>Gender, n (%):</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>1,964 (75.4)</td>
<td>946 (83.4)</td>
<td>&lt; 0.0001*</td>
</tr>
<tr>
<td>Female</td>
<td>647 (24.6)</td>
<td>193 (16.6)</td>
<td></td>
</tr>
<tr>
<td>Race, n (%):</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>1,510 (58.0)</td>
<td>765 (67.2)</td>
<td>&lt; 0.0001*</td>
</tr>
<tr>
<td>Black</td>
<td>689 (26.0)</td>
<td>296 (26.0)</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>251 (9.6)</td>
<td>103 (9.0)</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>151 (5.8)</td>
<td>41 (3.6)</td>
<td></td>
</tr>
<tr>
<td>Geographic region</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northeast</td>
<td>570 (21.9)</td>
<td>201 (17.7)</td>
<td>0.0020*</td>
</tr>
<tr>
<td>Midwest</td>
<td>777 (29.7)</td>
<td>344 (30.3)</td>
<td></td>
</tr>
<tr>
<td>South</td>
<td>717 (27.4)</td>
<td>304 (26.6)</td>
<td></td>
</tr>
<tr>
<td>West</td>
<td>647 (24.6)</td>
<td>296 (26.0)</td>
<td></td>
</tr>
<tr>
<td>Unknown</td>
<td>25 (0.9)</td>
<td>8 (0.7)</td>
<td></td>
</tr>
<tr>
<td>Income, $, mean (±SD)</td>
<td>53,473 (±33,644)</td>
<td>52,960 (±27,130)</td>
<td>0.5410</td>
</tr>
<tr>
<td>Insurance status, n (%):</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial</td>
<td>1,578 (61.5)</td>
<td>765 (67.2)</td>
<td>&lt; 0.0001*</td>
</tr>
<tr>
<td>Medicaid</td>
<td>1,015 (38.5)</td>
<td>374 (32.8)</td>
<td></td>
</tr>
<tr>
<td>Medicare</td>
<td>21 (0.8)</td>
<td>20 (1.8)</td>
<td></td>
</tr>
<tr>
<td>Supplemental Medicare</td>
<td>12 (0.5)</td>
<td>10 (0.9)</td>
<td></td>
</tr>
<tr>
<td>Medicaid + supplemental Medicare</td>
<td>5 (0.2)</td>
<td>5 (0.4)</td>
<td></td>
</tr>
</tbody>
</table>

Table 2. Baseline Clinical Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Control Cohort (n = 2,611)</th>
<th>QI-RE Cohort (n = 1,139)</th>
<th>P-Value</th>
</tr>
</thead>
</table>
| Mean antipsychotic pharmacy costs were significantly lower (difference of $1,983; P < 0.0001) in the QI-RE cohort (Table 2).

The QI-RE tool includes predictive models for commercial and Medicaid populations, but not for the Medicare population. This characteristic was found to be significantly more prevalent in the control cohort than in the QI-RE cohort (Table 1).

Adherence was measured using medication possession ratio (MPR) as defined by the following formula: MPR = (T/90) * 100, where T is the total number of days covered.

Table 3. Antipsychotic Adherence and Persistence During 1-Year Follow-Up Period

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Control Cohort (n = 2,611)</th>
<th>QI-RE Cohort (n = 1,139)</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistence in days—28-day gap allowance, mean (SD)</td>
<td>126 (±67)</td>
<td>147 (±77.6)</td>
<td>&lt; 0.0001*</td>
</tr>
</tbody>
</table>

Medication adherence was measured using medication possession ratio (MPR), which can be used to identify patients at high risk for future nonadherence.

Table 4. Mean healthcare costs during 1-year follow-up.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Control Cohort (n = 2,611)</th>
<th>QI-RE Cohort (n = 1,139)</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Healthcare</td>
<td>$10,210</td>
<td>$7,676</td>
<td>&lt; 0.0001*</td>
</tr>
<tr>
<td>Total Pharmacy</td>
<td>$5,129</td>
<td>$3,192</td>
<td>&lt; 0.0001*</td>
</tr>
<tr>
<td>Total Medical</td>
<td>$5,081</td>
<td>$4,484</td>
<td>&lt; 0.0001*</td>
</tr>
</tbody>
</table>

LIMITATIONS

- The retrospective study was based on a 1-year baseline period and a 1-year follow-up period. Outcome analyses in this study may not reflect results that would have been observed if longer follow-up periods were used.

- The QI-RE tool includes predictive models for commercial and Medicaid populations, but not for the Medicare population. This characteristic was found to be significantly more prevalent in the control cohort than in the QI-RE cohort (Table 1).

- The QI-RE tool includes predictive models for commercial and Medicaid populations, but not for the Medicare population. This characteristic was found to be significantly more prevalent in the control cohort than in the QI-RE cohort (Table 1).

CONCLUSIONS

- The QI-RE tool resulted in significant reductions in mean healthcare costs (difference of $2,534; P < 0.0001) in the QI-RE cohort compared with the control cohort.

- The QI-RE tool resulted in significant reductions in mean healthcare costs (difference of $2,534; P < 0.0001) in the QI-RE cohort compared with the control cohort.

REFERENCES

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E. Muser,1 S.L. Slabaugh,2 A. Louder,2 N. Patel2
1Janssen Scientific Affairs, LLC, Titusville, NJ, USA; 2Comprehensive Health Insights, Inc., Louisville, KY, USA

INTRODUCTION

Background and Rationale

• Schizophrenia is a chronic mental health disorder that is associated with high utilization of healthcare resources and high medical costs.
• Adherence to antipsychotic medications is an important component of successful management of the disease and has been shown to increase rates of successful treatment and reduced hospitalization costs.

Methods

• Study Design and Cohort

• Background and Rationale
  - The QI-RE tool is an assessment for quality improvement and risk evaluation tool developed by Janssen Scientific Affairs, LLC, and Boston Health Economics, Inc., that applies published regression equations to pharmacy and medical claims to assess patient risk for future antipsychotic nonadherence. The tool was developed in the development of a treatment adherence regimen was significantly worse than the control intervention.

RESULTS

Adherence and Persistence during the Follow-up Period: The QI-RE tool as being at “high risk” for future antipsychotic nonadherence compared with cohorts not designated as being at “high risk”

• QI-re cohort and/or are dually eligible for Medicare and Medicaid. This characteristic was found to be significantly more prevalent in the control cohort than in the QI-RE cohort (Table 1).

• The QI-RE cohort had a significantly lower MPR of members with a gap in therapy, mean (SD) 0.57 (±0.23) vs 0.72 (±0.22), < 0.0001* (Figure 1).

• Adherence rates for patients in the QI-RE cohort were lower during the first 28 days and 14 days of follow-up than in the control cohort. The difference in mean total pharmacy costs ($18,000 vs $12,000) was even greater, suggesting that the nonadherence behavior was not limited to the baseline period (January 1, 2010, to December 31, 2010) (Table 3).

• Adherence rates for patients in the QI-RE cohort were lower during the follow-up period than in the control cohort. The difference in mean total pharmacy costs ($18,000 vs $12,000) was even greater, suggesting that the nonadherence behavior was not limited to the baseline period (January 1, 2010, to December 31, 2010) (Table 3).

• The RxRisk-V Comorbidity Score was significantly higher in the control cohort than in the QI-RE cohort, and no adjustment was made for multiplicity.

CONCLUSIONS

• This study used a 1-year baseline period and a 1-year follow-up period. Outcome measures in this study population were derived from claims data that would be available for ongoing follow-up periods.

• The QI-RE tool includes predictive models for commercial and Medicaid populations, but it is not the Medicaid population. No adjustment was made for multiplicity.

• The RxRisk-V Comorbidity Score was significantly higher in the control cohort than in the QI-RE cohort, and no adjustment was made for multiplicity.

REFERENCES


LIMITATIONS

• This study used a 1-year baseline period and a 1-year follow-up period. Outcome measures in this study population were derived from claims data that would be available for ongoing follow-up periods.

ACKNOWLEDGMENTS

The authors thank the Bio-Aspire team for providing technical assistance with this project.

Disclosures

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