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Association between Triptan Use and Cardiac Contraindications in an Insured Migraine Population

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Methods: Study Population

- Ten representative commercial and/or Medicaid health plans in the MedAssurant Medical Outcomes Research for Effectiveness and Economics Registry (MORE2 Registry™) were included in the study.

- The reporting year (the year of claims data on which measurement was based) was 2009.

- Only adult members between ages 18 and 64, with both medical and pharmacy benefits, were eligible for inclusion (N = 2.5 million, across the 10 plans).

- The Migraine Population was identified through claims and pharmacy data as patients having at least one of the following criteria:
  - 1 or more claim(s)/encounter(s) for migraine, or
  - 2 or more "episodes" of headache reflected by multiple claims/encounters ("recurrent headache") ≥7 days apart, or
  - 1 or more prescription(s) for a triptan or migraine analgesic

- Individuals with a diagnosis of subarachnoid hemorrhage, brain tumor, and/or intracranial bleed were excluded.

Triptans were identified through pharmacy claims based on at least one prescription for any 5-HT1B,1D receptor agonist (triptan).

Migraine Quality of Care Measurement Definitions

<table>
<thead>
<tr>
<th>Measure</th>
<th>Measurement</th>
<th>Denominator</th>
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</thead>
<tbody>
<tr>
<td>RX.2 Prescription for a Triptan</td>
<td>A prescription for at least one triptan. Inclusion criteria: 1 prescription with an opioid, ED or hospital inpatient stay OR cardiac contraindication identified for a triptan.</td>
<td>All patients in the Migraine Population with a prescription for a triptan in measurement year.</td>
</tr>
<tr>
<td>RX.8 Prescription for Triptan AND Cardiac Contraindication</td>
<td>A prescription for at least one triptan and a cardiac contraindication with an opioid, ED or hospital inpatient stay OR cardiac contraindication identified for a triptan.</td>
<td>All patients in the Migraine Population with a prescription for a triptan in measurement year.</td>
</tr>
</tbody>
</table>

Results

Migraine Quality of Care Measurement Set (RX.2 and RX.8) by Age Group

Distribution of Triptan Prescriptions AND Cardiac Contraindication(s) by Age Group

Distribution of Triptan Prescriptions AND Cardiac Contraindication(s) by Age Group

<table>
<thead>
<tr>
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<td>ICD-9-CM: 414.11-414.9</td>
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<td>Peripheral Vascular Syndromes</td>
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</tr>
</tbody>
</table>

References


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Key Findings

- 7.7% of the Migraine Population were identified as having a cardiac contraindication.
- 37.7% of the Migraine Population had at least one triptan prescription filled during the measurement year (RX.2).
- 22.0% of the Migraine Population had at least one triptan prescription filled during the measurement year with a cardiac contraindication for triptans had at least one triptan prescription filled during the year.
- 4.9% of the Migraine Population having at least one triptan prescription filled during the year had a cardiac contraindication noted (RX.8). This rate ranged from 3.2% to 7.8% across the 10 plans.
- More than twice as many individuals in the 50-64 age group who were using triptans had cardiac contraindications compared to those aged 18-49.

Discussion

Triptans and Cardiac Contraindications

- Our data show that almost 8% of the Migraine Population had a cardiac contraindication as determined by at least one medical or pharmacy claim during the measurement year.
- Twenty-two percent of the Migraine Population identified as having a cardiac contraindication used a triptan during the measurement year. Highly varied rates of use between health plans is of particular interest.
- Our study demonstrates an unmet medical need for migraine patients who have cardiovascular disease/risk.

The Migraine Quality Measurement Set

- This examination of two measures included in the Migraine Quality Measurement Set demonstrates the potential value of the measures to identify pharmacy utilization trends.
- In addition to identifying a general concern about the widespread use of triptans in the at-risk population with cardiac contraindications, the pilot test demonstrates significant variations in use across health plans.
- The measures can be of value to health plans in identifying potential quality and safety issues and comparing their performance with national benchmarks.

Background

- Safety concerns exist when using triptans to treat patients with cardiac contraindications.
- Triptans cause vasoconstriction, a safety concern for migraines with cardiovascular (CV) disease or other cardiac risk factors.
- All triptans contain contraindications in their packages intended to avoid use in patients with cardiac conditions.
- Previous research indicates that clinicians are less likely to prescribe triptans in patients with CV disease or CV risk factors.
- Limited research has examined the proportion of migraine patients with cardiovascular disease or those individuals who were concurrently treated with triptans.

Migraine Quality of Care Measurement Set

- A set of measures were originally developed in 2007, by the Jefferson School of Population Health and the Jefferson Headache Center, with input from a national panel of advisors with clinical expertise in migraine.
- The Migraine Quality of Care Measurement Set was developed to examine utilization of services within a health plan to identify potential quality and safety concerns associated with care for the population identified with migraine.
- The measures and measurement specifications were updated in 2010 to align with current evidence.
- A pilot test of the 2010 measures was then conducted, using data from 10 health plans.
- The intent of the measures is to allow plans to examine their utilization over time, and in relation to national benchmarks.

Study Aims

- The aims of this study were:
  1. To examine the prevalence of cardiovascular disease in the migraine population.
  2. To assess the relationships between 5-HT1B,1D receptor agonist ("tripタン") utilization and the presence of cardiac contraindications in the migraine population.