The study reviews prescription drug TV advertisements from pharmaceutical companies between the years 2010 – 2015. In this study, 18 prescription products are separated by therapeutic areas and include: disease-modifying antirheumatic drugs (DMARDs), antipsychotics, anti-hypertensives, anti-seizure medications, new oral anticoagulants (NOACs), fibromyalgia therapies, Type II diabetes (T2D) therapies and erectile dysfunction (ED) therapies. Television advertisements for each product were viewed individually and indicators to assess risk versus benefit were collected as follows for each product:

- Total communication time (in seconds)
- Total communicated risk time (in seconds)
- Total advertisement time (in seconds)
- Percentage proportion of risk information communicated
- Percentage proportion of benefit information communicated
- Communication of black box warning for applicable drugs
- Number of SAEs and warnings communicated in advertisement compared to number of SAEs and warnings listed in the package insert.

A comparative analysis was performed using the above indicators. The outcomes that are established include (i) proportion of risk to benefit narratives as a percentage across therapeutic areas (ii) correlation between SAEs narrated in advertisements and SAEs listed in package inserts. To establish a proportion of risk versus benefit narration, the percentages recorded from individual advertisements were rounded to the nearest whole number. Analysis of SAEs consisted of Black Box Warnings being communicated or not communicated in the advertisement for applicable drugs and percentage of serious warnings and precautions communicated in the advertisement that overlapped with warnings and precautions from the package insert. A range of 0-100% in increments of 20 was established to bucket number of drugs communicating the percentage of serious warnings.

### Results

#### Table 1: Trends in risk to benefit narration in television advertisements by prescription drug product

<table>
<thead>
<tr>
<th>Prescription Product</th>
<th>Risk to Benefit Narration Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Etanercept, fluticasone/salmeterol, rosvastatin, HPV vaccine</td>
<td>38-70</td>
</tr>
<tr>
<td>Adalimumab, celecoxib, budesonide/formoterol, aripiprazole, pregabalin, dapagliflozin</td>
<td>40-60</td>
</tr>
<tr>
<td>Metametrex furoate, aripiprazole, dabigatran, canagliflozin, sildenafil</td>
<td>50-50</td>
</tr>
<tr>
<td>Duloxetine, lurasidone</td>
<td>60-60</td>
</tr>
<tr>
<td>Tadalafil</td>
<td>70-90</td>
</tr>
</tbody>
</table>

Table 1 identifies basic trends in the risk to benefit proportion in television promotions by major products. The proportion of SAEs and warnings communicated in advertisements compared to number of SAEs and warnings listed in the package insert.

#### Figure 2: Black Box Warning (n=10)

- No
- Yes
- Yes/No

#### Figure 3: Serious Warnings Percentage Range (n=18)

- 0-10
- 21-40
- 41-60
- 61-80
- 81-100

#### Table 2: Trends in risk to benefit narration in television advertisements by prescription drug product

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<thead>
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These outcomes were collected to reflect the "fair balance" rule in television advertisements and if the risk narration correlated with the SAEs listed in the package inserts of each product.

#### Limitations

- Some drug products aired multiple advertisements for the same product and communicated inconsistent information making it difficult to interpret risk versus benefit information comprehensively.

#### Conclusions

- The study only uses the most recent television advertisement located online at the time of data collection. However, this may not correlate to the latest commercials broadcasted on television.
- Package inserts were pulled from the most up to date sources (manufacturer website) and may not accurately correlate with date of originally aired advertisement.
- These outcomes were collected to reflect the "fair balance" rule in television advertisements and if the risk narration correlated with the SAEs listed in the package inserts of each product.
- Lack of consistency exists between risk versus benefit proportions between different products. A product that is considered the "gold standard" in the therapeutic area may cause a consumer to be misinformed.
- The communication of black box warnings currently differs between various therapeutic areas.
- Manufacturers must strive to incorporate a higher percentage of serious warnings into television advertisements.

#### Disclosure

The authors have nothing to disclose.