Results

Figure 1. Sample Attrition

<table>
<thead>
<tr>
<th>Individuals with new CRT implant between</th>
<th>1/1/2012-6/30/2013, and 12 months continuous enrollment in pre-period</th>
<th>n=2,589</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dis-enrolled within 1 year after implant</td>
<td>n=239 (7.46%)</td>
<td>Decreased: n=774 (21.59%)</td>
</tr>
</tbody>
</table>

Study population n=2,589 (80.86%)

Figure 2. Reduced Costs of Healthcare Resource Utilization

<table>
<thead>
<tr>
<th>Measure</th>
<th>1yr pre-CRT</th>
<th>1yr post-CRT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean LOS</td>
<td>$1943</td>
<td>$169</td>
</tr>
</tbody>
</table>

Figure 3. Increased Length of Stay

<table>
<thead>
<tr>
<th>Measure</th>
<th>1yr pre-CRT</th>
<th>1yr post-CRT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean LOS</td>
<td>5.80</td>
<td>4.48</td>
</tr>
</tbody>
</table>

Figure 4. Reduced Inpatient Admissions and ER Visits

<table>
<thead>
<tr>
<th>Measure</th>
<th>1yr pre-CRT</th>
<th>1yr post-CRT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inpatient admissions, including HF-related admissions, were significantly reduced.</td>
<td>$1943</td>
<td>$169</td>
</tr>
</tbody>
</table>

Conclusions

- CRT implantation was associated with reduced costs and all-cause and HF-related inpatient admissions in this Medicare Advantage population, despite increases in overall and HF-related LOS.
- This observational study of real world practice supports results found in randomized clinical trials and extends prior work to include costs and ER visit assessments.

Discussion

- When compared to the COMPANION clinical trial, HF patients in the present study were older and more likely to be male with a higher prevalence of diabetes (Table 2).
- However, fewer patients in the present study had evidence of HF-related medication intake, underlining the importance of studying the impact of CRT on outcomes in real-world practice.

Table 2. Clinical trial comparison

<table>
<thead>
<tr>
<th>Measure</th>
<th>Present study</th>
<th>COMPANION trial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>75 (median)</td>
<td>70 (median)</td>
</tr>
<tr>
<td>Gender</td>
<td>Female 75%</td>
<td>Female 75%</td>
</tr>
<tr>
<td>Diabetes</td>
<td>45%</td>
<td>45%</td>
</tr>
<tr>
<td>ACE or ARB</td>
<td>90%</td>
<td>75%</td>
</tr>
<tr>
<td>Beta Blocker</td>
<td>50%</td>
<td>65%</td>
</tr>
<tr>
<td>Loop diuretic</td>
<td>58%</td>
<td>70%</td>
</tr>
</tbody>
</table>

Limitations

- Due to limitations of administrative data, detailed clinical information, such as New York Heart Association or American Heart Association class and left ventricular ejection fraction, were not available.
- The study was subject to limitations common in administrative claims analyses, including coding errors and missing data.
- The findings are representative of Humana’s Medicare Advantage population with CRT implant and may not be generalizable to younger individuals or the general U.S. population.
- This preliminary study was conducted using a 24-month continuously enrolled population and a longer, more in-depth study is needed to validate these findings.

References

3. Humana, Inc., Louisville, KY.