The Relationship between Online Activity & Biometric Tracking and Medication Adherence among members with Hypertension

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There is a significant relationship between member engagement in healthy activities and biometric tracking through Balance Rewards for healthy choices™ and better adherence to prescribed antihypertensive medications.

BACKGROUND

- In 2013, a national community pharmacy launched Balance Rewards for healthy choices™ (BRhc) an online and mobile program that gives members points (incentives) for making healthy choices and tracking activities and biometrics such as walking, running, cycling, and body weight.
- In April 2014, the program expanded to offer points for connecting biometric devices and tracking blood glucose and blood pressure.

OBJECTIVE

- To determine the relationship between member engagement in BRhc and adherence to blood pressure medications, with focus on: physical activity and blood pressure tracking.

METHODS

- **Study design:** Retrospective cohort study
- **Study sample:** Members newly enrolled in the BRhc program between May 1 - June 30, 2014 who tracked an activity or biometric within 6 months of enrollment and had at least one fill of an antihypertensive medication in 2014 (GPI2=33, 34, 36, 37).
- **Outcome variable:** Adherence to antihypertensive medications using proportion of days covered (PDC)\(^1\). calculated from each members’ index prescription fill date to December 31, 2014
- **Activity variables:** Blood pressure tracking, and physical activity steps converted into miles on a 2,000:1 basis. Members were also segmented by those logging < or ≥ 180 miles in 6 months.
- **Statistical analysis:** Descriptive analysis, Student’s t-test, and chi-square test. A p-value of <0.05 was considered significant. All statistical analyses were conducted using SAS version 9.3 (SAS Institute Inc., Cary, NC).
RESULTS

- Overall, BRhc members who filled antihypertensive prescriptions were older and had more comorbidities compared to the general BRhc member population with any prescription fill in 2014. (See Table 1)

- Among BRhc members with hypertension, 1,388 (28.1%) tracked their blood pressure and 3,557 (72.0%) tracked steps. Blood pressure tracking and higher levels of physical activity were associated with significantly greater levels of medication adherence. (See Figure 1)

Table 1. BRhc Members Demographics and Maintenance

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>BRhc Members (n=16,410)</th>
<th>BRhc Members with Hypertension (n=4,943)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median Age</td>
<td>39.97</td>
<td>47.0</td>
</tr>
<tr>
<td>Female %</td>
<td>81.7%</td>
<td>73.7%</td>
</tr>
<tr>
<td>Mean Maintenance GPI2</td>
<td>2.7</td>
<td>4.1</td>
</tr>
<tr>
<td>Median Maintenance GPI2</td>
<td>2.0</td>
<td>4.0</td>
</tr>
</tbody>
</table>

Figure 1. Mean and Optimal PDC by Blood Pressure Tracking Status and Total Miles Logged

*Optimal PDC is defined as the percent of member’s with PDC ≥ 0.80
CONCLUSIONS

• This study demonstrated a significant relationship between higher levels of member engagement in healthy activities and biometric tracking through Balance Rewards for healthy choices™ and greater adherence to prescribed antihypertensive medications.

References:

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