Effects of a Web-based Patient Decision Aid on Biologics for Rheumatoid Arthritis: A Proof-of-Concept Study

Linda Li1,2, Chris Shaw1, Diane Lacalle1,2, Elaine Yacyszyn6, Allyson Jones6, Paul M. Adam6, Cheryl Koehn6, Alison Hoesn1,2, Jasmina Geldman1, Eric Sayre1, Nick Bansback2

1. Patient decision aids are designed to present benefits/harm of treatment options and clarify individuals’ preferences.

2. ANSWER-2 is a user-friendly decision aid for patients with rheumatoid arthritis (RA) who are considering biologic and small molecule agents.

3. Main feature is a trade-off decision framework.

4. Our PIHS-2 program helps patients consider value-sensitive options.

5. Previous research comparing ANSWER-2 with other education material will provide further insight into the value of patient decision aids in RA management.


7. Our results were similar to other studies evaluating patient decision aids in chronic diseases.

Background

To assess the effect of ANSWER-2 on patients’ perceived decision quality and self-management capacity.

Methods

1. Study design: Pre-post study.

2. Recruitment: Rheumatologists’ clinics, patient groups and social media.

3. Eligibility: 1) physician diagnosis of RA, 2) recommended to start/switch to a new biologic or small molecule agent, and 3) reliable access to the internet.

4. Procedure: After completing a baseline survey, participants completed the ANSWER-2 program and a follow-up assessment within 2 days.

5. Outcome measures: Decision Conflict Scale (DCS; 0-100), Partners in Health Scale (PIHS; 0-88, lower = better), and 3) Medication Education Impact Questionnaire (MeIQ; 6 subscales, higher score = better).

6. Statistical analysis: Paired t-test or Wilcoxon signed-rank test to assess differences pre and post intervention.

Results

Summary

1. 50 participants were recruited across Canada

2. Decisional conflict scores improved by an average of 21.2, 95% CI: -28.1, -14.4; p < 0.001. Before using ANSWER-2, 20% of participants scored ≤ 25, compared to 52% after the intervention.

3. PIHS scores improved by an average of 3.7, 95% CI: -6.3, -1.0; p = 0.009. MeIQ showed statistically significant improvement only in the self-management sub-scales (Table 2).

Table 1: Participant characteristics (n=50)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Before (%)</th>
<th>After (%)</th>
<th>Difference (95% CI)</th>
<th>Effect Size</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>DCS &lt; 25 (linked to implementation)</td>
<td>10 (20)</td>
<td>26 (52)</td>
<td>16 (14.0, 18.0)</td>
<td>0.56</td>
<td>0.001</td>
</tr>
<tr>
<td>DCS &gt; 75 (linked to implementation)</td>
<td>10 (20)</td>
<td>12 (24)</td>
<td>2 (0.0, 4.0)</td>
<td>0.05</td>
<td>0.001</td>
</tr>
<tr>
<td>MeIQ Self-care subscale</td>
<td>38 (76)</td>
<td>25 (51)</td>
<td>-13 (12.0, 14.0)</td>
<td>0.25</td>
<td>0.001</td>
</tr>
</tbody>
</table>

Conclusion


2. Our results were similar to other studies evaluating patient decision aids in chronic diseases.

3. Future research comparing ANSWER-2 with other education material will provide further insight into the value of patient decision aids in RA management.