Impact of Shared Decision Making on Outcomes among Patients with Pain: A Systematic Review & Meta-Analysis

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Background

• Pain is a global public health issue with significant clinical, economic, and humanistic burden.4
• Shared Decision Making (SDM), “the process of interacting with patients who wish to be involved in arriving at an informed, value-based choice among two or more medically reasonable alternatives” can improve clinical outcomes, decrease decisional conflict, and increase patient knowledge.5

Objective

• To investigate the impact of SDM on clinical, humanistic, and economic outcomes compared to usual/standard of care among patients with pain.

Search Strategy & Study Selection

• A comprehensive search strategy was developed, and studies were identified using PubMed/Medline, Embase, PsyCINFO, CINAHL, Cochrane, relevant websites and grey literature.
• Articles were eligible for inclusion if they were published in English language, before June 2020, included human subjects, including patients diagnosed with pain and involved SDM and reported clinical, humanistic and economic outcomes.
• Two independent authors screened titles and abstracts, and then extracted data following a full text review of included articles.

Risk of Bias

• RoB 2: A revised Cochrane risk-of-bias tool for randomized trials4 and ROBINS-I: Risk of bias tool for non-randomized studies was used.6

Data Analysis

• Data were entered into comprehensive meta-analysis (CMA; Version 2, Englewood, NJ: Biostat) software for analysis.
• The data were summarized in table format and for the meta-analysis, a random effects model was used, the standardized mean difference for each study was calculated, and a forest plot to pool the findings was developed.
• Cochran’s Q and P values were used to describe heterogeneity between studies and funnel plot and Kendall’s tau were used to assess publication bias.
• The a priori alpha level was 0.05.

Results

Characteristics of Included Studies

<table>
<thead>
<tr>
<th>Country</th>
<th>Therapeutic Area</th>
<th>Types of DAs</th>
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<tbody>
<tr>
<td>US (n=22)</td>
<td>Chest pain, stable CAD/angina, symptomatic CAD (n=10)</td>
<td>Validated DA like CPC-DA, PCI Choice, Head CT Choice, health literacy-based DA (n=8)</td>
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<tr>
<td>Germany (n=3)</td>
<td>Low back pain, back surgery, lumbar disc herniation (n=7)</td>
<td>Video, interactive videodisc/video program with a booklet (n=5); computerized information tool, web/internet-based DA, tablet-based DA (n=5)</td>
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<td>Netherlands (n=1), UK (n=1), and Australia (n=1)</td>
<td>Labor analgesia, cesarean delivery, hysterectomy (n=3); non-malignant chronic pain, musculoskeletal pain (n=3)</td>
<td>Patient dialogue, SDM, SDM and positive reinforcement, patients who participated in decision (n=4)</td>
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<tr>
<td>Australia (n=2); minor head trauma (n=1)</td>
<td>Fibromyalgia (n=2); knee osteoarthritis (n=2); major head trauma (n=1)</td>
<td>Patient DA (n=2); option grid DAs (n=1); booklet &amp; audio guide (n=1); integrated approach including complementary &amp; alternative medicine (n=1)</td>
</tr>
</tbody>
</table>

Methods

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Discussion & Conclusion

• There was a statistically significant reduction in decisional conflict and increase in patient knowledge as a result of using SDM.
• The findings are consistent with those reported in the Cochrane Review4 evaluating impact of SDM among patients facing treatment or screening decisions across various therapeutic areas.
• The impact of SDM tools on patient satisfaction remains inconsistent and elusive, warranting further real-world studies.

References

2. Head CT Choice, PCI Choice, Decision Aids, Health Literacy, Patient Dialog, Shared Decision Making, “the process of interacting with patients who wish to be involved in arriving at an informed, value-based choice among two or more medically reasonable alternatives” can improve clinical outcomes, decrease decisional conflict, and increase patient knowledge.
6. Favors Standard

Disclosure: Authors have nothing to disclose. To obtain the full citation for these references or for more information, contact Srujitha Marupuru at marupuru@pharmacy.arizona.edu.