Shared decision making for the older patient with advanced kidney disease

Dr Leanne Brown (PhD)
Nephrology Nurse Practitioner
Leanne.brown2@health.qld.gov.au
Overview

• Background
• Evidence
• Framework
• Research study
• Results
• Practical - OPTIONS – Decision Support Intervention
Background

- Escalating health care cost due, in part, to population aging and increasing incidence of chronic disease\(^1,2\)

- High prevalence of chronic kidney disease key contributor\(^2,3\)

- Number of deaths from CKD increased by 82% in last 20 years\(^4\)

Background

• Older patients have highest rate of ESKD and dialysis\textsuperscript{5,6}

• Dialysis has an economic impact of between $11.3\text{b}$ to $12.3\text{b}$\textsuperscript{7}

• Common cause of death worldwide is withdrawal from dialysis\textsuperscript{8}

---

Background

• Research indicates no established process to facilitate treatment decision making for older patients\(^9,10\)

• Shared decision making may achieve rational use of dialysis and potentially reduce futile treatment

Background

Clinicians share information

Patients consider options and balance with values

Together they make a decision

Shared Decision Making
Literature Review

Cochrane Systematic Review\textsuperscript{11}

- Improve knowledge
- Decreased indecision about personal values
- Lower decision conflict
- Active in decision making
- Improve understanding of risks and benefits

Literature Review

Decision Support Interventions (CKD)

• Spanish study: significantly less decisional changes\textsuperscript{12}
• UK study: higher scores for usefulness of written information\textsuperscript{13}
• Aust study: improved knowledge levels significantly\textsuperscript{14}

– Clinical practice guideline – NDT 2016 – use pt friendly tools visualize concepts and messages

Limited evidence, no RCTs

Theoretical Framework – Ottawa Decision Support Framework (ODSF)\textsuperscript{16}

Aim of study

• To examine effectiveness of decision support intervention (DSI) to support decision making for eligible patients when considering whether to undertake dialysis
# Patient criteria

## Inclusion Criteria
- ≥ 70 years of age
- ≤ 20 mL/min/1.73m²
- Chronic kidney disease

## Exclusion Criteria
- Non English speaking
- Medically incompetent to make health care decisions
- Eligible for transplantation
- Already made a treatment decision
Study Outcomes - Primary

Decision regret  (T1) & (T2)
  o  Measured with decision regret scale

Decision conflict  (T1)
  o  Measured with decision conflict scale
Study Outcomes - Secondary

• **Knowledge (T1)**
  - Knowledge Questionnaire

• **Health Related Quality of Life (T1) and (T2)**
  - SF-36v2®

• **Preparation for decision making (T1)**
  - Preparation for decision making scale
Participant Flow Diagram (CONSORT, 2010)

Enrolment
Assessed for eligibility (n=213)

Excluded (n=172)
+ Not meeting inclusion criteria (n=122)
+ Declined to participate (n=26)
+ Other reasons (n=24)

Randomised (n=41)

Allocation

Allocated to intervention (n=19)
+ Received intervention (n=16)
+ Did not receive allocated intervention (n=3)
Reasons: Voluntary drop out prior to T1 (n=3)

Allocated to standard care (n=22)
+ Received standard care (n=21)
+ Did not receive allocated intervention (n=1)
Reasons: Voluntary drop out prior to T1 (n=1)

Follow-Up

Completed follow up (n=15)
Withdraw from study (n=1) prior to T2

Completed follow up (n=21)

Analysis

Analysed (n=19)

Analysed (n=22)
# Results – Demographic and clinical profile

<table>
<thead>
<tr>
<th></th>
<th>Standard care (n=22)</th>
<th>OPTIONS (n=19)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex</strong></td>
<td>50.00</td>
<td>36.8</td>
<td>0.40</td>
</tr>
<tr>
<td>Female (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Age (years)</strong></td>
<td>78.55</td>
<td>77.21</td>
<td>0.45</td>
</tr>
<tr>
<td><strong>AKPS</strong></td>
<td>79.90</td>
<td>83.68</td>
<td>0.27</td>
</tr>
<tr>
<td><strong>BMI (kg/m²)</strong></td>
<td>28.77</td>
<td>29.67</td>
<td>0.60</td>
</tr>
<tr>
<td><strong>eGFR (mL/min)</strong></td>
<td>15.95</td>
<td>15.52</td>
<td>0.65</td>
</tr>
<tr>
<td><strong>CKD Stage (%)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stage 4</td>
<td>34.10</td>
<td>22.00</td>
<td>0.30</td>
</tr>
<tr>
<td>Stage 5</td>
<td>19.50</td>
<td>24.40</td>
<td></td>
</tr>
</tbody>
</table>
## Results – Decision Conflict (T1)

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Standard Care N=21</th>
<th>Options N=16</th>
<th>Mean Difference between groups</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decision Conflict (total)</td>
<td>15.95 ±23.00</td>
<td>20.31 ±17.36</td>
<td>4.36</td>
<td>0.53</td>
</tr>
<tr>
<td>Uncertainty (sub score)</td>
<td>21.43 ±30.91</td>
<td>43.75 ±34.76</td>
<td>22.32</td>
<td>0.047</td>
</tr>
<tr>
<td>Informed (sub score)</td>
<td>19.05 ±33.03</td>
<td>15.63 ±21.49</td>
<td>-3.42</td>
<td>0.72</td>
</tr>
<tr>
<td>Values Clarity (sub score)</td>
<td>23.81 ±29.02</td>
<td>18.75 ±23.27</td>
<td>-5.06</td>
<td>0.57</td>
</tr>
<tr>
<td>Feeling supported (sub score)</td>
<td>7.14 ±12.44</td>
<td>12.50 ±15.51</td>
<td>5.36</td>
<td>0.25</td>
</tr>
</tbody>
</table>
## Results – Decision Regret

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Estimate</th>
<th>95% Confidence Interval</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept 0=Intervention</td>
<td>36.87</td>
<td>14.64 – 59.11</td>
<td>0.002</td>
</tr>
<tr>
<td></td>
<td>0.73</td>
<td>-2.39 – 3.85</td>
<td>0.64</td>
</tr>
<tr>
<td>Gender 0=Male</td>
<td>0.48</td>
<td>-2.63 – 3.59</td>
<td>0.76</td>
</tr>
<tr>
<td>Age</td>
<td>0.09</td>
<td>-0.18 – 0.37</td>
<td>0.50</td>
</tr>
<tr>
<td>Time Point One</td>
<td>1.49</td>
<td>-0.18 – 0.37</td>
<td>0.50</td>
</tr>
</tbody>
</table>
## Results – Knowledge

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Standard Care N=21</th>
<th>OPTIONS N=16</th>
<th>Mean Difference between groups</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>27.51 ±23.73</td>
<td>60.39 ±25.67</td>
<td>32.88 (16.31– 49.44)</td>
<td>&lt; 0.001</td>
</tr>
</tbody>
</table>
Results – Health-Related Quality of Life

- Mental Health component summary score (MCS)
- Physical Health component summary score (PCS)
## Results – Utility of OPTIONS

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Standard Care N=21</th>
<th>OPTIONS N=16</th>
<th>Mean Difference between group</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation for Decision Making - Participant</td>
<td>77.74 ±22.30</td>
<td>83.44 ±13.26</td>
<td>5.70</td>
<td>0.37</td>
</tr>
</tbody>
</table>

**Preparation for Decision Making – Practitioner Score**

Mean Score 57.55

Range 36.36 – 81.82
Results – Time to decision

Note: Log rank=0.08
Discussion

• Significant improvement in knowledge

• Limitations
  – Small sample size
Significance of Research

• New knowledge on effectiveness of DSI to support older patient

• Knowledge of barriers experienced when undertaking research in this population and service context
Description of OPTIONS
Scope and Purpose of OPTIONS

1. Question, target audience and learning objectives
2. Risks & Benefits in detail
3. Summary: risk & benefits
4. How to make a decision
5. Further questions
Practical approach – using OPTIONS

Making Choices Decision Aid Along the Way Sheet 51 114 REV (2).pdf
Goal of OPTIONS

- Define or explain the problem
- Present options
- Discuss pros and cons (benefits/risks)
- Clarify patients values or preferences
- Discuss the patients ability or self-efficacy
- Check clarify patients understanding
- Make or defer decision
- Arrange follow up
• Role of HP and OPTIONS is to clarify the decision the patient is making

• Decision conflict and characteristics of decision and patients
  – Stage of decision making
  – Personal clinical characteristics
• Knowledge and Expectations

• Personal Values

• Personal resources

• Monitor and facilitate progress

https://decisionaid.ohri.ca/ Training Tool
Other decision aids

- My Kidneys My Choice – decision counselling as well as workbook
- [https://www.kidneyresearchuk.org/DialysisDecisionAid](https://www.kidneyresearchuk.org/DialysisDecisionAid)
- Dialysis Decision Aid: making the right choices for you
Summary

• OPTIONS improve knowledge for the older patient with advance kidney disease

• Shared decision making needs to incorporated into our clinical practice

• Reflect on practice and tools/aids we use
tak for at lytte

Leanne.brown2@health.qld.gov.au
TIME FOR QUESTIONS
Methods

• A pragmatic RCT evaluating effectiveness of outcomes

• Patients were randomly assigned to receive either standard or OPTIONS.

• Primary investigators were blinded to treatment allocation for data analyses.
Development process of Decision Support Intervention

Scope and purpose of decision support intervention and the target audience

Systematic Review – narrative analysis
Synthesis of other evidence

Decision Support Intervention

Synthesis of evidence regarding individuals’ information needs

Steering Committee (n=3)

Expert independent panel (n=5)

Final Version Decision Support Intervention
Synthesis of information needs

• Review of research identified patients not being offered treatment choices in a balanced manner

• Content of DSI informed by evidence

• Decision Aid Standards assessment criteria
Pragmatic RCT measuring effectiveness of OPTIONS supporting the older patient with advanced kidney disease in making a choice between dialysis and non-dialysis management.

Primary Outcome – Decision Regret

- Measured at T1 (1 month) & T2 (3 months)
- 5 questions
- Alpha-coefficient 0.81 – 0.92