Patient Decision Aids based on ODSF:
A synthesis of findings from 24 RCT’s

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Margaret Lawson, MD, MSc

O’Connor et al., Cochrane Library, 2009 plus update in 2010

Topics
1. Definition
2. Evidence
3. Use & Related Tools
4. Discussion: SWG

Patient Decision Aids
adjuncts to counseling

Inform
- Provide facts
  - Condition, options, benefits, harms
- Communicate probabilities

Clarify values
- Patient experiences
- Ask which benefits/harms matters most
- Facilitate communication

Support
- Guide in steps in deliberation/communication
- Worksheets, list of questions

An influenza prevention decision aid

What can you do to prevent influenza?

Inform
 Provide facts
• Condition, options, benefits, harms
• Communicate probabilities

Clarify values
• Patient experiences
• Ask which benefits/harms matters most
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• Worksheets, list of questions

What is influenza?
• Influenza is a common respiratory illness
• Infectious disease
• Spread by respiratory droplets
• Can be fatal
• vaccination and antiviral drugs
• Heart disease
• Diabetes
• Chronic lung disease
• What other health factors may affect your choice?

What are your options to decrease your risk of getting or spreading the flu?
• Take the flu vaccine
• Wash your hands
• Avoid close contact with sick people
• Clean and disinfect frequently touched objects and surfaces

Side Effects
• Placebo
• Flu shot
• Antiviral pills

A decision aid for those working in a healthcare setting
Rates Evidence Quality using STARS

**PLATINUM**
Systematic Review (meta-analysis) that is well-conducted and includes 2 or more randomised controlled trials

**GOLD**
Randomised controlled trial (1 or more) that tests at least 50 people with a treatment and 50 people without the treatment

**SILVER**
Observational studies or studies that did not assign people randomly to groups who receive or do not receive the treatment

**BRONZE**
Expert opinion or reports of specific cases

Consider which positive and negative features matter most

<table>
<thead>
<tr>
<th>How important is it to you?</th>
<th>Not Important</th>
<th>Very Important</th>
<th>Options to consider</th>
</tr>
</thead>
<tbody>
<tr>
<td>To avoid ALL side effects of taking flu shots and antiviral pills?</td>
<td>☐ ☐ ☐ ☠ ☠ ☠ ☠</td>
<td>☠ ☠ ☠ ☠ ☠ ☠ ☠ ☠</td>
<td>✗</td>
</tr>
<tr>
<td>To avoid a needle and side effects unlike there is an outbreak?</td>
<td>☠ ☠ ☠ ☠ ☠ ☠ ☠</td>
<td>☠ ☠ ☠ ☠ ☠ ☠ ☠</td>
<td>and ☠</td>
</tr>
<tr>
<td>To avoid the inconvenience and side effects of taking pills?</td>
<td>☠ ☠ ☠ ☠ ☠ ☠ ☠</td>
<td>☠ ☠ ☠ ☠ ☠ ☠ ☠</td>
<td>☠</td>
</tr>
<tr>
<td>To avoid getting the flu for the whole flu season?</td>
<td>☠ ☠ ☠ ☠ ☠ ☠ ☠</td>
<td>☠ ☠ ☠ ☠ ☠ ☠ ☠</td>
<td>☠</td>
</tr>
<tr>
<td>To avoid spreading the flu to family and patients?</td>
<td>☠ ☠ ☠ ☠ ☠ ☠ ☠</td>
<td>☠ ☠ ☠ ☠ ☠ ☠ ☠</td>
<td>☠</td>
</tr>
<tr>
<td>To avoid work limitations during a flu</td>
<td>☠ ☠ ☠ ☠ ☠ ☠ ☠</td>
<td>☠ ☠ ☠ ☠ ☠ ☠ ☠</td>
<td>☠</td>
</tr>
</tbody>
</table>

Assess knowledge and DC

**Step 3: What else do you need to make your decision?**

First enter what your decision and help you from the key facts. Check ☑ the best answer.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Do you know enough about the benefits and side effects of each option?</th>
<th>☑ ☑ ☑ ☐ ☐ ☐ ☐</th>
</tr>
</thead>
<tbody>
<tr>
<td>Values</td>
<td>Are you clear about which benefits and side effects matter most to you?</td>
<td>☑ ☑ ☕ ☕ ☑ ☑ ☐</td>
</tr>
<tr>
<td>Support</td>
<td>Do you have enough support and advice from others to make a decision?</td>
<td>☑ ☑ ☕ ☑ ☐ ☐ ☐</td>
</tr>
<tr>
<td>Uncertainty</td>
<td>Do you feel sure about the best choice for you?</td>
<td>☑ ☑ ☐ ☐ ☐ ☐ ☐</td>
</tr>
</tbody>
</table>

Topics

1. Definition
2. Evidence
3. Use & Related Tools
4. Discussion: SWG

Systematic Review of
Patient Decision Aids based on
the Ottawa Decision Support Framework
Update 2009+

O’Connor AM, Bennett CL, Stacey D, Mullan S
Search Results (to week 1 Oct 2009)

- 32,554 citations
- 1,637 abstract screen
- 240 full-text screen
- 129 excluded
- 16 pending classification
- 3 trials in progress
- 2 references to included studies
- 90 eligible trials
- 66 trials not ODSF

Topics of patient decision aids evaluated in 24 RCTs

- **Medical**
  - 6 HRT (Deschamps 04; Dodin 01; Lagares 03; O'Connor 98; O'Connor 99; Rostom 02)
  - 2 atrial fibr anti-coag (Man-Son-Hing 99; McAlister 05)
  - 1 cardiovascular (Lalonde 06)
  - 1 osteoporosis (Oakley 06)

- **Surgical**
  - 1 mastectomy (Goel 01)
  - 1 prophylactic mastectomy (Schward 09)

- **Screening**
  - 3 BRCA1/2 gene (Tiller 06; Wakefield 08; Wakefield 08b)
  - 1 colon cancer (Wakefield 08)
  - 2 prenatal (Hunter 05; Nagle 08)
  - 1 mammography (Mathieu 07)

- **Obstetrics**
  - 1 VBC (Brown et al. 08)
  - 1 Breech (Nassar 07)
  - 1 MS child bearing (Prunty 08)

- **Other**
  - 1 pre-op autologous blood donation (Laupacis 06)
  - 1 referral to CF transplant centre (Vandenheem 09)

Elements in Patient Decision Aids

<table>
<thead>
<tr>
<th>ODSF</th>
<th>Non-ODSF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Options, outcomes, implicit values clarification</td>
<td>100%</td>
</tr>
<tr>
<td>Clinical condition</td>
<td>100%</td>
</tr>
<tr>
<td>Probabilities of benefits/harms</td>
<td>100%</td>
</tr>
<tr>
<td>Explicit values clarification</td>
<td>100%</td>
</tr>
<tr>
<td>Examples of others/ other's opinions</td>
<td>90%</td>
</tr>
<tr>
<td>Guidance in decision making steps</td>
<td>95%</td>
</tr>
<tr>
<td>For use before counseling</td>
<td>100%</td>
</tr>
</tbody>
</table>

ODSF includes 2009 plus update (4 PtDAs needed contents verified)

O'Connor et al., Cochrane Library, 2009

Knowledge DA versus Usual Care

<table>
<thead>
<tr>
<th>DA Type</th>
<th>Cochrane ODSF</th>
<th>Cochrane Non-ODSF</th>
</tr>
</thead>
<tbody>
<tr>
<td>WMD 11.0 (7.7; 14.3) for 10 RCTs based on ODSF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WMD 15.2 (11.7; 18.7) for 18 RCTs in Cochrane 2009</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WMD 15.7 (11.4; 19.9) for 15 RCTs in Cochrane 2009 (not ODSF)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WMD 20.6 (16.5; 24.8) for 4 RCTs in Cochrane 1999</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Knowledge Detailed versus Simple

<table>
<thead>
<tr>
<th>DA Type</th>
<th>Detailed</th>
<th>Simple</th>
</tr>
</thead>
<tbody>
<tr>
<td>WMD 4.7 (2.1; 7.4) for 5 RCTs based on ODSF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WMD 4.6 (3.6; 6.2) for 9 RCTs in Cochrane 2009</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WMD 4.6 (2.5; 6.8) for 4 RCTs in Cochrane 2009 (not ODSF)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Accurate Risk Perceptions

<table>
<thead>
<tr>
<th>DA Type</th>
<th>WMD 4.2 (1.7; 6.7) for 6 RCTs based on ODSF</th>
</tr>
</thead>
<tbody>
<tr>
<td>RR 1.9 (1.5; 2.5) for 10 RCTs in Cochrane 2009</td>
<td></td>
</tr>
<tr>
<td>RR 1.8 (1.2; 2.7) for 4 RCTs in Cochrane 2009 (not ODSF)</td>
<td></td>
</tr>
</tbody>
</table>

WMD 4.7 (2.1; 7.4) for 5 RCTs based on ODSF

WMD 4.6 (3.6; 6.2) for 9 RCTs in Cochrane 2009

WMD 4.6 (2.5; 6.8) for 4 RCTs in Cochrane 2009 (not ODSF)
### Decisional Conflict

#### PtDA vs Usual Care

- **WMD** -3.8 (-5.5; -2.2) for 13 RCTs based on ODSF
- **WMD** -6.1 (-8.6; -3.6) for 10 RCTs in Cochrane 2009
- **WMD** -7.7 (-11.4; -4.1) for 6 RCTs in Cochrane 2009 (not ODSF)

#### Participation in decision making

- **RR** 0.74 (0.4; 1.3) for 1 RCTs based on ODSF
- **RR** 0.61 (0.45; 0.82) for 8 RCTs in Cochrane 2009
- **RR** 0.59 (0.42; 0.83) for 7 RCTs in Cochrane 2009 (not ODSF)

#### Remaining undecided

- **RR** 0.44 (0.22; 0.92) for 4 RCTs based on ODSF
- **RR** 0.51 (0.34; 0.75) for 4 RCTs in Cochrane 2009
- **RR** 0.47 (0.29; 0.77) for 2 RCTs in Cochrane 2009 (not ODSF)

### NEW Choice of cancer risk management options

#### (prophylactic mastectomy or oophorectomy)

- **RR** 1.14 (0.75; 1.74) for 2 RCTs based on ODSF

### NEW Informed values-based choice

- **RR** 1.28 (1.07; 1.54) for 5 RCTs based on ODSF
Discussion

1. Take 2 minutes to jot down
   - Strengths
   - Weaknesses
   - Gaps in research
2. Discussion

Strengths, Weaknesses, Gaps

- **Strengths**
  - 
  - 

- **Weaknesses**
  - 
  - 

- **Knowledge Gaps**
  - 
  - 

Limitations of Cochrane Review 2009

Variability
- Populations
- Measures
- Time frames
- Usual care interventions

Implications for Research

Further evaluation
- Web-based decision aids
- Preference linked outcomes
- Persistence with chosen option, decisional regret, health utilities, resource use, costs
- Patient-practitioner communication
- Litigation rates
- Use by diverse groups of patients
- Dissemination strategies /use in clinical practice

O'Connor et al., Cochrane Library, 2009

Methods: Data Sources

- Medline (1966 to Oct 2009)
- CINAHL (1982 to Oct 2009)
- Embase (1980 to Oct 2009)
- PsychINFO (1806 to Oct 2009)
- Cochrane Central Register of Controlled Trials (October 2009)
- Personal contact with known developers and evaluators through a shared decision making list-serve up to December 2006
Methods: Study Selection

• Two independent reviewers
• Structured screening form
• Inconsistencies resolved by consensus
• Criteria for inclusion...
  – Meet definition of patient decision aid
  – RCT design
  – Participants make decision re screening or treatment for themselves, a child or incapacitated significant other (not hypothetical)

Data extraction

• 2 reviewers independently extracted data using structured forms
• RCT quality will be assessed using the risk of bias assessment criteria
• Inconsistencies were resolved by consensus