Effectiveness and development methodology of printed educational materials: the Decision Box example

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(http://decision.chaire.fmed.ulaval.ca/)

KT Canada National Seminar Series
8 November 2012
Presentation outline

- Background
- Research program theoretical framework
- Systematic review - effectiveness of PEMS
- Projects to develop/validate Decision Boxes
- Conclusion
Evidence-base practice

- 51% treatments: insufficient evidence
- 7% treatments: trade-offs between benefits & harms

Clinical evidence, BMJ group (2007). How much do we know? [http://clinicalevidence.bmj.com/ceweb/about/knowledge.jsp](http://clinicalevidence.bmj.com/ceweb/about/knowledge.jsp)
Multimorbidity

- 70% people > 65 years old seen in primary care
  - 5 or more chronic diseases
- Few treatment recommendations
  - Trials cover a single disease
  - Trials often exclude elderly people (+75 years old)

Lack of applicable knowledge

Shared Decision Making (SDM)

- Information exchange
- Deliberation
- Negotiation
- Agreement
Impacts of shared decision making

- Patients
  - ↑ patients knowledge of the options
  - ↑ patient understanding of the probabilities
  - ↓ number of uncertain patients

- Optimization of healthcare services - ↓ use of less appropriate options
  - ↓ elective surgery
  - ↓ prostate cancer screening
  - ↓ antibiotics for respiratory infections

Légaré et al. CMAJ 2012
Canada research chair in implementation of shared decision making (F. Légaré)

- Training in SDM for healthcare professionals
- Intention of clinicians to participate in training in SDM
  - determined by location and timing of training
    - Allaire et al. *J Contin Educ Health Prof* 2012

- DECISION+ effective
  - Légaré et al. *CMAJ* 2012
Printed educational material

- Distribution of published or printed recommendations for clinical care
  - clinical practice guidelines, audio-visual materials, electronic publications

- **Accessible**, convenient to use, low cost

- Common approach to translate research findings into clinical practice (familiar)
Drug facts box

![TAMOXIFEN Study Findings Table](image)

13,000 women at high risk of getting breast cancer were given TAMOXIFEN or a sugar pill for 6 years. Here’s what happened:

<table>
<thead>
<tr>
<th>What difference did TAMOXIFEN make?</th>
<th>Women given a sugar pill</th>
<th>Women given TAMOXIFEN (20 mg a day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did TAMOXIFEN help?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fewer women got invasive breast cancer</td>
<td>2.7%</td>
<td>1.4%</td>
</tr>
<tr>
<td>Fewer women died of from breast cancer</td>
<td>0.9%</td>
<td>0.5%</td>
</tr>
<tr>
<td>Did TAMOXIFEN have side effects?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Life-threatening side effects</td>
<td></td>
<td></td>
</tr>
<tr>
<td>More women had a blood clot in their leg or lungs</td>
<td>0.4%</td>
<td>0.8%</td>
</tr>
<tr>
<td>More women had a stroke</td>
<td>0.4%</td>
<td>0.6%</td>
</tr>
<tr>
<td>More women got invasive uterine cancer</td>
<td>0.2%</td>
<td>0.5%</td>
</tr>
<tr>
<td>Symptom side effects</td>
<td></td>
<td></td>
</tr>
<tr>
<td>More women had hot flashes</td>
<td>69%</td>
<td>81%</td>
</tr>
<tr>
<td>More women had vaginal discharge</td>
<td>35%</td>
<td>55%</td>
</tr>
<tr>
<td>More women had cataracts needing surgery</td>
<td>1.1%</td>
<td>1.7%</td>
</tr>
<tr>
<td>Other things to know</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dying for any reason</td>
<td>1.1%</td>
<td>0.9%</td>
</tr>
</tbody>
</table>

Decision Box prototype (2010)

**DECISION BOX**

**Prenatal screening for trisomy 21 with the serum integrated test**

**What is this test for?**
- Screening estimates the risk of the fetus of having trisomy 21 (Down’s syndrome). If the test shows the risk to be high, the doctor offers amniocentesis to verify whether the fetus actually has trisomy 21.
- This information allows the patient to decide to end the pregnancy if the results are abnormal.

**How is the test performed?**
- Two blood samples are taken: the first between the 15th and the 18th week of pregnancy, and the second between the 16th and the 18th week of pregnancy.

**Is the test accurate?**
- The majority of fetuses with trisomy 21 will be detected during screening, however, the test can sometimes fail to detect trisomy 21 and thus give the patient false reassurance. It can also indicate a high risk of trisomy 21 where there is none, causing the patient to undergo amniocentesis unnecessarily and possibly provoking a miscarriage.

**Who should consider being tested?**
- Any pregnant woman. The risk of trisomy 21 increases with the age of the pregnant woman.

**Why is screening a decision?**
- Screening is most useful for patients who would consider ending their pregnancy in the case of a trisomy 21, but the test only suggests trisomy 21 for trisomy 21 to be validated, the patient must undergo amniocentesis, and amniocentesis can cause miscarriage.

**PRENATAL SCREENING FOR TRISOMY 21: STUDY FINDINGS**

**Benefits of screening**
- For each 10,000 women screened, 4% were identified as being at a higher risk of carrying a fetus with trisomy 21. These women had amniocentesis to verify the results of the screening, and 1% were actually carrying a fetus with trisomy 21.
- For each 10,000 women screened, 99% were identified as being at low risk of carrying a fetus with trisomy 21. These women were reassured.

**Harms of screening**
- Of the 950 women identified as being at low risk of carrying a fetus with trisomy 21, 1 was actually carrying such a child. This woman had been falsely reassured.
- Of the 490 women identified as being at a higher risk of carrying a fetus with trisomy 21, 48 were not carrying a fetus with trisomy 21.
- Of these 490 women, 2 experienced a miscarriage following amniocentesis.

Of every 10,000 women who underwent screening:
- 950 were at low risk of carrying a fetus with trisomy 21
- 490 were at a higher risk and had amniocentesis
- 2 suffered a miscarriage provoked by amniocentesis
- 10 learned that their fetus did not have trisomy 21
- 480 learned that their fetus had trisomy 21

*Confidence in the results: High. These results are based on the findings of an observational study (Walld et al, Health Technol Assess 2003) that used high-quality methods and whose results are similar to the results of other studies.

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Goal of my research program

To develop strategies to create, evaluate, and implement Decision boxes in primary care while taking into account organisational and clinical contexts.
Identify Problem
Identify, Review, select Knowledge

Adapt Knowledge to Local Context

Assess Barriers/Facilitators to Knowledge Use

Select, Tailor, Implement Interventions

Monitor Knowledge Use

Evaluate Outcomes

Sustain Knowledge Use

Knowledge Inquiry

Synthesis

Products/Tools

KTA framework

Identify, Review, select Knowledge

Tailoring Knowledge

Systematic review: Effectiveness of printed educational material to improve practice

- Identify Problem: Identify, Review, select Knowledge
- Assess Barriers/Facilitators to Knowledge Use
- Adapt Knowledge to Local Context
- Synthesis
- Products tools
- Knowledge Inquiry

Monitor Knowledge Use

Sustain Knowledge Use

Pilot #1: To develop a framework for the Decision box

Assess Barriers/Facilitators to Knowledge Use

Adapt Knowledge to Local Context

Identify Problem
Identify, Review, select Knowledge

Knowledge Inquiry

Synthesis

Products/Tools

Tailoring Knowledge

Monitor Knowledge Use

Outcomes

Sustain Knowledge Use

Pilot #2: Evaluate barriers and facilitators to using the Decision boxes

- Identify Problem
  - Identify, Review, select Knowledge

- Adapt Knowledge to Local Context

- Assess Barriers/Facilitators to Knowledge Use

- Synthesis
- Products/Tools
- Knowledge Inquiry
  - Tailoring Knowledge

- Evaluate Outcomes
- Sustain Knowledge Use

Monitor Knowledge Use
Study #1: Evaluate the Decision boxes’ effectiveness

- Identify Problem
  - Identify, Review, select Knowledge
- Assess Barriers/Facilitators to Knowledge Use
- Adapt Knowledge to Local Context
- Select, Tailor, Implement Interventions
- Synthesis
- Products/Tools
- Tailoring Knowledge
- Knowledge Inquiry
- Sustain Knowledge Use
- Evaluate Outcomes

Monitor Knowledge Use
Study #2: Scale-up and sustain the Decision boxes

- Identify Problem
  - Identify, Review, select Knowledge
- Assess Barriers/Facilitators to Knowledge Use
- Adapt Knowledge to Local Context
- Synthesis
- Products/Tools
- Knowledge Inquiry
- Tailoring Knowledge

Monitor Knowledge Use

Evaluate Outcomes

Sustain Knowledge Use

Main question:
Are printed educational materials effective to improve professional practice and health care outcomes?

Secondary question: What characteristics (source, format, targeted behaviour, etc) make them more effective?

Publication:
Systematic review - Inclusion criteria

1. **Types of study**: RCTs, quasi-randomized, CBAs, ITS

2. **Participants**: Healthcare professionals

3. **Comparisons**:
   - PEM *versus* no intervention
   - PEM *versus* single intervention
   - Multifaceted with PEM *versus* multifaceted without PEM

4. **Outcomes**: objective professional practice / patient outcomes
PEM characteristics

- Source: Who?
- Message: Says what?
- Channel: Through which medium?
- Receiver: To whom?
- Destination: In which setting?

McGuire 1969
PEM characteristics

McGuire 1969
# PEM characteristics considered

<table>
<thead>
<tr>
<th>Source</th>
<th>Message</th>
<th>Channel</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Source</strong>&lt;br&gt;(e.g. researchers, gov. expert body)</td>
<td><strong>Content</strong>&lt;br&gt;Clinical area</td>
<td><strong>Format</strong>&lt;br&gt;Format&lt;br&gt;(e.g. full CPG, quick reference to CPG, journal article)</td>
</tr>
<tr>
<td><strong>Endorsement</strong>&lt;br&gt;(yes, no)</td>
<td><strong>Type of targeted behaviour</strong>&lt;br&gt;(e.g. prescribing, screening)</td>
<td><strong>Appearance</strong>&lt;br&gt;(e.g. B&amp;W, graphically enhanced)</td>
</tr>
<tr>
<td><strong>Tailoring</strong>&lt;br&gt;(e.g. to individuals, personalised)</td>
<td><strong>Purpose</strong>&lt;br&gt;(e.g. increase or stop management)</td>
<td><strong>Length</strong>&lt;br&gt;(&lt; 2 pages, &gt; 2 pages)</td>
</tr>
<tr>
<td></td>
<td><strong>Level of evidence</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Educational component</strong></td>
<td></td>
</tr>
</tbody>
</table>
Analyses

- **Studies grouped** according to study design, endpoint, comparison

- **Controlled trials**: median effect size across outcomes for each study & median of these effect sizes across studies.

- **Interrupted time series studies**:
  - Reanalyzed to calculate slope & level
Interrupted time series (ITS)

Results: what’s new?

<table>
<thead>
<tr>
<th>Version</th>
<th>Number of studies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RCTs</td>
</tr>
<tr>
<td>Freemantle 1997</td>
<td>10</td>
</tr>
<tr>
<td>Farmer 2008</td>
<td>12</td>
</tr>
<tr>
<td>This update</td>
<td>14</td>
</tr>
</tbody>
</table>
45 studies - 52 PEMs

- 36 studies: 1 PEM/study
- 2 studies: 11-12 PEMs evaluated simultaneously
- 3 ITS: >2 PEMs - not enough data for each
- 4 ITS: > 2 PEMs - enough data for each
## Format - 52 studied PEMs

<table>
<thead>
<tr>
<th>Format</th>
<th>no. PEMs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Publication in peer-reviewed journal</td>
<td>23</td>
</tr>
<tr>
<td>Complete evidence-based guidelines</td>
<td>16</td>
</tr>
<tr>
<td>Newsletters or bulletins</td>
<td>6</td>
</tr>
<tr>
<td>Summaries of clinical guidelines</td>
<td>3</td>
</tr>
<tr>
<td>Manual of peer-reviewed clinical article</td>
<td>1</td>
</tr>
<tr>
<td>other</td>
<td>3</td>
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Printed educational materials

Main question:
Are printed educational materials effective to improve professional practice and health care outcomes?
## Summary of findings – main comparison

**Patient or population:** healthcare professionals *(physicians 90% studies)*

**Comparison:** printed educational material vs no intervention

<table>
<thead>
<tr>
<th>Outcomes*</th>
<th>Standard median effect size</th>
<th>No of participants (studies)</th>
<th>Quality of the evidence (GRADE)</th>
</tr>
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<tbody>
<tr>
<td><strong>Categorical measure of professional practice</strong>&lt;br&gt;Absolute risk difference</td>
<td>0.02 higher&lt;br&gt;[-0.06 to +0.29]</td>
<td>294,937 (7 studies)</td>
<td>⊕⊕⊕⊕ low&lt;sup&gt;1, 2, 3&lt;/sup&gt;</td>
</tr>
<tr>
<td><strong>Continuous measure of professional practice</strong>&lt;br&gt;Standardised mean difference</td>
<td>0.13 higher&lt;br&gt;[-0.16 to +1.96]</td>
<td>297 (3 studies)</td>
<td>⊕⊕⊕⊕ very low&lt;sup&gt;3,4,5&lt;/sup&gt;</td>
</tr>
</tbody>
</table>
### Summary of findings – main comparison

1. Unclear **sequence generation**.
2. Unclear addressing of **incomplete outcome** data.
3. **Imprecision** of the observed effect

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Summary of findings – main comparison

**Patient or population:** healthcare professionals (physicians 9/10 studies)

**Comparison:** printed educational material vs no intervention

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<th>No of participants</th>
<th>Quality of the evidence (GRADE)</th>
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<td>⊕⊕⊕⊕ very low³,⁴,⁵</td>
</tr>
</tbody>
</table>

³ Imprecision of the observed effect:
4 Inadequate allocation concealment
5 Inconsistency: one study measured a deterioration in outcomes whereas the other two showed improvements.
### ITS: professional practice measures

<table>
<thead>
<tr>
<th></th>
<th>No. studies</th>
<th>No. outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>↑ slope and/or ↑ level</td>
<td>16</td>
<td>27</td>
</tr>
<tr>
<td>↑ in one and ↓ in other</td>
<td>7</td>
<td>11</td>
</tr>
<tr>
<td>↓ in both the slope and ↓ level</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

**OVERALL ↑ level across studies**

standardized median change in level = 1.7

range: -7.0 to +14.3
Printed educational materials

**Secondary question:** What characteristics (source, format, targeted behaviour, etc) make them more effective?
Format - RCT

Absolute Risk Difference

- Publication in peer-reviewed journal: n = 1
- Full CPG: 4
- Newsletter or bulletin: 1
- Other: 1
Format - ITS

Median change in level of outcome

n = 20

Publication in peer-reviewed journal
Full CPG
Newsletter or bulletin
other
Results from ITS

- Results of ITS more positive than results of RCTs (consistency of results)
  - high profile paper only: not generalizable to publications in any journal
- Prone to important risks of bias: retrospective, often without pre-specifying the expected effect of the intervention.
- Unavoidable design → passive dissemination
Conclusions from review

- Need for more RCTs to evaluate PEMs
- Need head-to-head trials: different features of PEMs
- What about electronic delivery of PEMs?
- PEMs studied not used as ‘persuasive communication’
- Secondary analyses to improve study of characteristics
  - Judith Versloot and Onil Bhattacharyya
  - Juliana Genova and Marie-Pierre Gagnon
Pilot #1

Objective: to involve users in the creation of the Decision box framework

Publications:
Giguere et al. Implementation Science 2012
Giguere et al. BMC Med Inform Decis Mak 2011

Canada research chair in implementation of shared decision making in primary care  http://decision.chaire.fmed.ulaval.ca/
Collaborators

**Laval University:**
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Pierre Pluye
Roland Grad

**McMaster University:**
Brian Haynes

**Research professionals:**
Annie Frappier
Michael Shulha
Decision Box prototype (2010)
What is a Decision box?

• What is it used for?
  • To prepare clinicians to communicate evidence to patients

• When is it used?
  • Clinicians read it before meeting patients

• How is it delivered?
  • via Internet, by email, printable
  • data presented simply and clearly → usable
  • Brief (1-2 pages): takes little time to read
What does the Decision Box include?

- Probabilities of risks and benefits of all options
- Best available data
- Assessment of the quality of the evidence

In which format?

- Probabilities in numbers, graphs, statements
- Formats comparable across risks and benefits
Methods- 6 focus groups

- 2 prototypes: PSA test & prenatal screening
- 3 groups in English
  - 1 family physician group
  - 2 patient groups (for each topic)

- 3 groups in French
  - 1 family physician group
  - 2 patient groups (for each topic)
Discussion guide:

The User Experience Honeycomb

“Are you looking for documents like this one?”

Peter Morville http://semanticstudios.com
2011 – First generation Decision box

The prostate-specific antigen (PSA) test to screen men for prostate cancer

Probabilities of benefits and harms

Patient’s values and preferences

<table>
<thead>
<tr>
<th>Yes</th>
<th>DECISION</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Later</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This document prepares the clinician to discuss scientific data with the patient so they can make an informed decision together.

Presenting the PSA test to patients

What is this test for?
- The PSA blood test estimates the risk of having prostate cancer. If the test shows the risk to be high, the physician offers to do a biopsy of the prostate to verify if the man has prostate cancer.

Who might consider being tested?
- Men between 50 and 70 years of age with at least a 10-year life expectancy.
- Men at higher risk (with one or more affected first-degree relatives - brother, father, or African American men) may consider screening at earlier age (40 years old).

Why do patient preferences matter when making this decision?
- There are pros and cons to taking this test:
  - **PROS**: The test could prevent 1 death from prostate cancer for each 1000 men screened on average 2 times every 4 years during 15 years.
  - **CONS**: The test could detect a slow-growing cancer that may never cause a health problem, leading to unnecessary treatments (autopsies show that a significant proportion of prostate cancers never become clinically significant). Overall mortality is not reduced.
- There is a lack of evidence on screening outcomes:
  - After 11 to 13 years of follow-up, the 2 best available studies showed either a small reduction or no reduction in mortality in men invited to screening every four years compared to men not invited to screening.
  - One small study suggests that screening over 14 years might improve survival.
- Both doing or not doing the test are acceptable options:
  - Major guidelines (USPSTF, AUA, ACC, CUA*) disagree on whether to be screened or not. However, all recommend informed decision-making. We propose that:
    - 1. the decision takes into account patient’s values and preferences
    - 2. the clinician shares this decision with the patient.

Benefits of screening
- Increased survival*
  - For each 1000 men screened during 11 years, 1 (0.1%) death from prostate cancer will be prevented.

Number of deaths from prostate cancer prevented for each 1000 men screened during 11 years*

<table>
<thead>
<tr>
<th>Screening test</th>
<th>Prevented risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>1.00</td>
</tr>
<tr>
<td>1 member</td>
<td>0.94</td>
</tr>
<tr>
<td>2 members</td>
<td>0.93</td>
</tr>
</tbody>
</table>

- As many as 4 deaths from prostate cancer (0.4%) might be prevented for each 1000 men screened if men were followed for 14 years.5
- Reassurance
  - For each 1000 men screened, 830 (83%) will be identified as being at low risk of having prostate cancer. These men will be reassured.

Harms of screening
- False reassurance
  - Of the 830 men identified as being at low risk, 30 will actually have prostate cancer. These men will have been falsely reassured.
- False alarm
  - For each 1000 men screened, 170 (17%) will be identified as being at high risk of having prostate cancer. Of these, the majority will be found not to have prostate cancer at the "confirmatory" biopsy.

A few men will have complications from the biopsy. Among the men who have a biopsy:
- 1% will be hospitalized
- 3% will have an infection requiring antibiotics.

Overdiagnosis
- For each 1000 men screened, 96 (9.4%) will be treated for prostate cancer (36 more than in the non-screened group) and the majority will be treated.2 For half of these treated men, cancer would not have progressed to cause illness or death.3 Complications from treatment: x<sup>3</sup>
- 50% experience sexual dysfunction
- 10% experience urinary incontinence

How much confidence can we have in these results?
- Low: Results for prostate cancer mortality are inconsistent among trials. All available studies present high risks of bias. Numbers presented are founded on results from the best available study.1–3

Questions to identify the patient’s decision making needs:
- Do you have any questions about the benefits and harms of each option?
- Which benefits and harms matter most to you?
- Do you feel sure about the best choice for you?
- Who will support and advise you in making a choice?

References:

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Endorsement more apparent

Explicit goal

The prostate-specific antigen (PSA) test to screen men for prostate cancer

- Probabilities of benefits and harms
- Patient's values and preferences

This document prepares the clinician to discuss scientific data with the patient so they can make an informed decision together.

Presenting the PSA test to patients

What is this test for?
- The PSA blood test estimates the risk of having prostate cancer. If the test shows the risk to be high, the physician offers to do a biopsy of the prostate to verify if the man has prostate cancer.

What is considered a high risk of prostate cancer? The cutoff PSA level chosen to define a positive result (high risk) and distinguish it from a negative result is usually 4 ng/mL.
*How much confidence can we have in these results?*

**Low** Results for prostate cancer mortality are inconsistent among trials. All available studies present high risks of bias. Numbers presented are founded on results from the best available study.¹²

**Questions to identify the patient's decision making needs:**

- Do you have any questions about the benefits and harms of each option?
- Which benefits and harms matter most to you?
- Do you feel sure about the best choice for you?
- Who will support and advise you in making a choice?

Prompts to help doctor seek patient's values
Clinician’s experience of an evidence-based document to facilitate SDM

Accessing the document

Integrating the information

Using the information in practice

Transmitting the document to one’s peers
Clinician’s experience of an evidence-based document to facilitate SDM

Accessing the document

Integrating the information
1. Having a positive first impression
2. Finding and understanding the information
3. Trusting the information

Using the information in practice
1. Communicating the information to the patient
2. Seeking the patient’s value
3. Sharing the decision with patient

Transmitting the document to one’s peers
Pilot #2

**Main objective**: to study the barriers and facilitators to the use of Decision Boxes by primary care teams

**Secondary objective**: to evaluate feasibility of an experimental trial

**Published protocol**: Giguere et al. BMC Med Inform Decis Mak 2012
Collaborators

**Laval University:**
Michel Labrecque  
France Légaré  
François Rousseau

**McGill University:**
Pierre Pluye  
Roland Grad

**McMaster University:**
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Lisa Dolovich  
Matthew Greenway

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Michael Shulha  
Amélie Trépanier  
Allison Brown  
Alain Noël  
Johanna Geraci  
Stéphane Turcotte  
Pierre-Hugues Carmichael

**Students:**
Debi Banerjee  
Iqra Syed
Pilot #2 - methods

- **Participants**
  - Family physicians, nurses and residents from 6 primary care clinics in Quebec and Ontario

- **Intervention**
  - 8 Decision Boxes relevant to primary care available on a website (www.decisionbox.ulaval.ca)
  - Weekly delivery of Decision Boxes by email

- **Study procedures**
  - Web-questionnaires completed by clinicians
  - Following the 8-week intervention, interviews with clinicians and clinic directors
Method to study barriers

**INNOVATION**
- What are the clinicians’ perceptions of the Decision Box?
  - Cognitive impact
  - Relevance
  - Use
  - Expected benefits

**ADOPTEURS**
- Do clinicians intend to use it in practice?
  - Intention to use the information
  - Social norm
  - Attitude
  - Perceived behavioural control
  - Perception of role within team

**CONTEXTE**
- What are the environmental factors that influence the use in practice of the information delivered by the tool?
  - Ressources
  - Organisational structure
  - Interprofessional collaboration

*Ottawa Model of Research Use (Graham and Logan, 2004).*
Results

**Innovation**

What are the clinicians’ perceptions of the Decision Box?

- It will change their practice (54%)
- Information is relevant (76%)
- They expect the information to benefit their patients (83%)

**Adopteurs**

Do clinicians intend to use it in practice?

- Clinicians have the intention to use the Decision Boxes

**Contexte**

What are the environmental factors that influence the use in practice of the information delivered by the tool?

- Availability of multiple formats
- Prior training in SDM
- CPD units
- Additional information for patients before consultation
Optimizing the Decision box approach

Protocol stage
Clinician’s experience of an evidence-based document to facilitate SDM

Accessing the document

Integrating the information
1. Having a positive first impression
2. Finding and understanding the information
3. Trusting the information

Using the information in practice
1. Communicating the information to the patient
2. Seeking the patient’s value
3. Sharing the decision with patient

Transmitting the document to one’s peers

Giguere et al. Implement Sci 2012
Objective

- To optimize the Decision Box intervention to facilitate clinicians' use of the information in practice, more precisely communicating the information to the patient, seeking the patient’s values and sharing the decision with the patient.
Method – usability testing

Individual interviews with clinicians

1. we ask clinicians to review the documents and supporting material (website, patient decision aids, tutorial), thinking aloud as they go.

2. we then ask them to summarize the information to an actor impersonating a patient.
Method – usability testing

- Iterative interviews
- Discussions videotaped and transcribed.
- Thematic qualitative data analysis to list all the changes proposed and problems underlined.
Conclusions

- Next steps
  - To optimize the approach
  - To evaluate the effectiveness of Decision boxes
  - To scale-up and sustain the Decision boxes

- Data on the factors to improve the effectiveness of PEMs

- Study of the dynamics of innovation in health systems
  - Innovation #1: Knowledge translation tool
  - Innovation #2: Shared decision making
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http://www.decisionbox.ulaval.ca/