



**Establishing the value of innovative medicines  
While dealing with uncertainty using  
multicriteria decision analysis (MCDA)**

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**EVIDEM Collaboration - Board of Directors**

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# Outline

- ❖ Overview
- ❖ Defining value - MCDA
  - ❖ Decision criteria
  - ❖ Weighting techniques
  - ❖ Scoring scales
  - ❖ Mathematical model & qualitative considerations
- ❖ Exploring uncertainty - HTA
  - ❖ By-criterion evidence synthesis
  - ❖ Interactive open web registry
- ❖ Users & applications
- ❖ Advantages & challenges
- ❖ Future developments

# Overview - EVIDEM Collaboration

- ❖ **Not-for profit** independent legal entity
- ❖ **Object:** promote health and efficient decisionmaking via systematic assessment of evidence and value of healthcare interventions
  - **MCD**A based decision making framework tools\* freely available under Creative Commons license
  - **Collaborative development**
    - ❖ Open tools **regularly upgraded** based on academic research and feedback from users
    - ❖ **Open web** registry
- ❖ **On-going collaborations**
- ❖ Canada, Italy, Netherlands, New Zealand, South Africa, UK, USA
- ❖ Tools used and tested by **government agencies** and **academic centers**
- ❖ **Funding & support:** Canadian Institutes of health Research (CIHR), Pfizer Canada (start up), BioMedCom (in kind)



Structuring the natural thinking process  
to define value

→ **MCDA**

# Defining value of interventions Criteria?

Which criteria define the most valuable healthcare interventions?

- Elicit from evaluators
- Use an existing set of criteria & adapt
  - MCDA-based EVIDEM framework

# Defining value of interventions

## Criteria?

### Apply MCDA principles

- ❖ criteria should be complete,
- ❖ with minimum overlap
- ❖ mutually independent
- ❖ operationalizable\*

\*National Economic Research Associated. Multi-criteria analysis manual 2005.  
[www.communities.gov.uk/pub/252/MulticriteriaanalysismanualPDF1380Kb\\_id1142252.pdf](http://www.communities.gov.uk/pub/252/MulticriteriaanalysismanualPDF1380Kb_id1142252.pdf)

# Defining value of interventions

## EVIDEM conceptual approach

- Develop a universal generic tool and a contextualization tool
  - ❖ MCDA Core Model
  - ❖ Contextual Tool

# MCDA Core Model

## What should we do for sustainable healthcare systems?

### 15 universally normative criteria

- ➔ Highest rank/value or priority should be given to interventions
- ❖ For severe disease (D1)
- ❖ For common disease (D2)
- ❖ For disease with many unmet needs (C2)
- ❖ Recommended in consensus guidelines by experts (C1)
- ❖ Conferring major improvement in efficacy/effectiveness over standard of care (I1)
- ❖ Conferring major improvement in safety & tolerability over standard of care (I2)
- ❖ Conferring major improvement of patient perceived health over standard of care (I3)
- ❖ Either conferring major risk reduction (T1) or major alleviation of suffering (T2)
- ❖ That results in savings in treatment expenditures (E1) as well as other medical and non medical expenditures (E3); *cost-effective (E2)\**
- ❖ For which there is sufficient data (Q1), that is fully reported (Q2) and valid and relevant (Q3)

8 \*Cost-effectiveness is a composite of some elements of other criteria and does not comply with the non-redundancy design requirement of MCDA. It may be included in the framework since many decisionmaking processes currently rely on this composite measure.



# Contextual Tool

## What is our context and what can be done?

### 6 criteria

#### ➔ Define objectives & priorities – 2 contextual normative criteria

- ❖ Alignment with scope and mission of health care system/plan (Et1)
- ❖ Defining country/institutional priorities for populations & access ( Et2)

#### ➔ 4 Feasibility criteria

- ❖ Exploring opportunity costs (forgone interventions) and affordability (Et3)
- ❖ Verifying system capacity (e.g., infrastructure, skills) and appropriate use of intervention (O1)
- ❖ Assessing political/historical context (e.g. cultural acceptability, precedence) (O2)
  - *Impact of intervention on innovation and research?*
- ❖ Realizing pressures/barriers from healthcare stakeholders (O3)

# Overall EVIDEM framework structure

## Clustering criteria

### MCDAs core model

#### Universally normative criteria

##### Disease impact (quantitative)

- Disease severity (D1)
- Size of population affected by disease (D2)

##### Context of intervention

- Clinical guidelines (C1)
- Comparative intervention limitations (C2)

##### Intervention outcomes

- Improvement of efficacy/effectiveness (I1)
- Improvement of safety and tolerability (I2)
- Improvement of patient reported outcomes (I3)

##### Type of benefit

- Public health interest (e.g., prevention, risk reduction) (T1)
- Type of medical service (e.g., symptom relief, cure) (T2)

##### Economics

- Budget impact on health plan (cost of intervention only) (E1)
- Impact on other spending (e.g., hospitalization, disability) (E2)
- Cost-effectiveness of intervention (E3)

##### Quality/uncertainty of evidence

- Adherence to requirements of decisionmaking body (Q1)
- Completeness and consistency of reporting (Q2)
- Relevance and validity of evidence (Q3)

### Contextual tool

#### Context & feasibility criteria (qualitative)

##### Ethical framework\*

- **Utility** - Goals of healthcare (Et1)
- **Fairness** - Population priority & access (Et2)
- **Efficiency** - Opportunity costs & affordability (Et3)

##### Other system-related criteria

- System capacity and appropriate use (e.g., infrastructure, skills) (O1)
- Stakeholder pressures (O2)
- Political/historical context (e.g. precedence) (O3)

**10**\*Based on three principles; since often conflicting, clearly identify trade-offs and legitimize decision by engaging a broad range of stakeholders & explaining decision; legitimizing decision is key to provide accountability for reasonableness (A4R)

# Adaptation

## Define value in your context

- **Include priorities** defined using the contextual tool as additional criteria of the MCDA Core Model (e.g., rare diseases)
- **Transfer** other contextual criteria in the MCDA core model
- **Expand** criteria into subcriteria\*

Criteria	Possible sub criteria
E3 Impact on other spending	<ul style="list-style-type: none"><li>•Impact on primary care expenditures</li><li>•Impact on hospital care expenditures</li><li>•Impact on long-term care expenditures</li><li>•Impact on productivity</li><li>•Financial impact on patients</li><li>•Financial impact on caregivers</li></ul>

- **Remove** criteria

## Not all criterion are equal



Disease severity



Improvement of efficacy

# Measuring value

## Weight elicitation techniques\*

- ❖ Capture individual perspective on relative importance of criteria independently of healthcare interventions
- ❖ No gold standard

→ Simple techniques

❖ EVIDEM

Criteria	Weights				
	Low	←————→			High
Example Disease severity		□1	□2	□3	□4 □5

- ❖ Kepner -Tregoe Analysis (KTA)
  - ❖ Direct point allocation
- More complex
- ❖ Analytical hierarchy process (AHP)
  - ❖ Best/worst scaling
  - ❖ Conjoint analysis

→ Adapt to user preference/context

# Measuring value

## Scoring scale?

- ❖ Measure performance of intervention
- ❖ Need to define:
  - ❖ Type of scale/number of options
  - ❖ Scale anchors for each criteria
- ➔ Simple approach
  - ❖ EVIDEM

Criteria	Scoring scale
Example Disease severity	<input type="checkbox"/> 0 - not severe <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 - very severe

- ➔ More complex (e.g., more scale options, boolean operators for each option)
- ➔ Adapt to user preference/context

# Appraising interventions

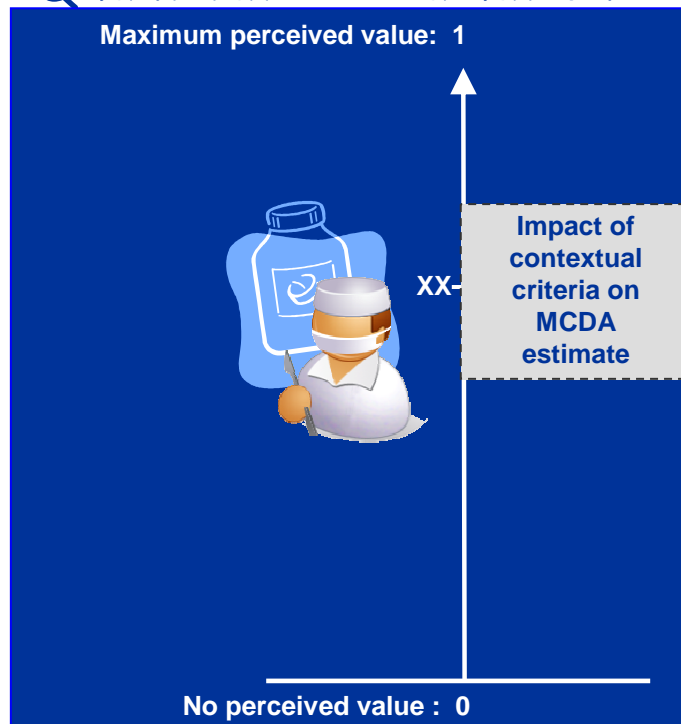
## Mathematics & qualitative considerations

### Type of mathematical model

- ❖ Simple linear model (combine normalized weights and scores) to calculate perceived value of intervention

### Ranking of healthcare interventions

- ❖ Quantitative evaluation



- ❖ Combined with qualitative impact of context

Contextual criteria	Qualitative impact on appraisal/ranking
Example Political/ historical context	<input type="checkbox"/> Negative <input type="checkbox"/> Neutral <input type="checkbox"/> Positive



Finding the evidence  
(scientific and colloquial)  
& assess uncertainty

→ HTA





# HTA objectives

- ❖ Inform healthcare decisionmaking/priority setting
- ❖ Systematic reviews & synthesis of evidence
- ❖ Multidisciplinary and pragmatic
- ❖ Dissemination and reaching out

# By-criterion HTA report

- ❖ **Detailed methodology in agreement with good HTA practices\***
  - Comprehensive literature review
  - Analyses & synthesis of evidence (scientific and colloquial)
  - Assessment of the quality of studies (clinical, economic, epidemiologic)
  - Validation by experts
  
- ❖ **Data synthesized for each criterion (multidisciplinary)**
  - Highly synthesized (quick grasp)
  - Details with evidence tables
  - Full text source documentation (hyperlinks)
  
- ❖ **Web based (dissemination)**
  - Open source software (Tikiwiki)

## Web registry

<http://www.evidem.org/evidem-collaborative.php>

## Demo: Interactive prototype

<https://www.evidem.org/tiki/?page=DEMO-main>



## Overview of intervention

**Last Update:** April 2009

**Disease:** Turner syndrome (TS)

**Intervention:** Growth Hormone (GH)

**Setting:** Canada

**Drug class:** Polypeptide hormone

**Indication:** treatment of short stature in girls with Turner Syndrome

**Administration:** subcutaneous injection 3 to 7 days a week

**Intervention duration:** Needs to be established. Initiate as soon as growth failure demonstrated until satisfactory height reached (6 years of treatment starting at 10 years)

**Comparator(s):** No treatment

**Economic burden of illness:** No data available

## Interactive by-criterion HTA report – high level synthesis - excerpt

	Intrinsic criteria	Highly synthesized information	Score	Comments
	<b>Disease impact</b>			
D1	Disease severity	<b>Female-specific genetic disorder</b> characterized by short stature, cardiovascular defects, absence of puberty, infertility, increased risk of diabetes, defects in visuo-spatial organization and nonverbal problem-solving, and decreased life expectancy. <a href="#">[see details]</a>	<input type="radio"/> 0 Not severe (minor inconvenience) <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 Very Severe	<input type="checkbox"/> Low Score due to data - specify
D2	Size of population	<b>Prevalence:</b> 40/100,000 female adults.	<input type="radio"/> 0 Very rare disease <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 Common disease	<input type="checkbox"/> Low Score due to data - specify
	<b>Context of intervention</b>			
C1	Clinical guidelines	<b>International guidelines (no Canadian Guidelines):</b> Consider GH treatment as soon as	<input type="radio"/> 0 No recommendation	



# Interactive by-criterion HTA report

## Details on evidence - example

### D1 - Disease severity

Turner syndrome is a female-specific genetic disorder (complete or partial loss of one of the X chromosome) characterized by short stature and presenting a wide spectrum of abnormalities, including cardiovascular defects (17-45%), lymphedema, gonadal dysgenesis (90% requiring hormone replacement therapy to induce puberty), infertility, miscarriage, hypothyroidism (15-30%), risk of obesity, ophthalmic defects, hearing problems and ear malformations, gastrointestinal and renal manifestations (Bondy 2007, Sybert et al. 2004). Patients are at increased risk of impaired glucose tolerance and diabetes (Hjerrild 2008, Holl 1994). Overall, cancer risk appeared not to be significantly increased; increased risks were reported in some studies for brain and nervous system tumors, and for colon and rectal cancer (Stochholm 2006, Schoemaker 2008, Hjerrild 2008). Defects in visuo-spatial organization and nonverbal problem-solving affect most patients with TS; in addition, impaired psychomotor and social functioning have been reported (Bondy 2007, Sybert et al. 2004).

In young patients, psychosocial issues arise: impaired peer relationship, teasing, social isolation, anxiety, shyness, and poor self-esteem (Bondy 2007, Sybert et al. 2004, Schmidt et al, Busschbach et al. 1998). In audiotaped interviews, Turner Syndrome patients reported infertility as their biggest concern (range: 36% of girls aged 7-13 yrs to 74% of adults aged 20-39 yrs; Sutton et al. 2007). However, many Turner Syndrome patients of all ages reported to be bothered by short stature (36% girls, 44% adolescents and adults, 55% mature adults 40-59 yrs; Sutton et al. 2007); 44% of 25 adult Turner Syndrome patients reported to be bothered by short stature (Busschbach et al. 1998). Short stature is

Life expectancy is decreased in women with Turner anomalies (Stochholm et al. 2006; Sybert et al. 2007) (number of deaths / expected number of deaths =

[Return to DEMO Scoring intervention \(MCDA Ma](#)  
[Return to DEMO Menu](#)

The screenshot shows a web browser window displaying a PubMed search result. The browser's address bar shows the URL: <http://www.ncbi.nlm.nih.gov/pubmed/17047017?opt=Citation>. The page title is "Care of girls and women with Turner syndrome: A guideline of the Turner Syndrome Study Group." The author is listed as "Bondy CA; Turner Syndrome Study Group." The journal is "J Clin Endocrinol Metab." The abstract text is visible, starting with "OBJECTIVES: The objective of this work is to provide updated guidelines for the evaluation and treatment of girls and women with Turner syndrome (TS)." The page also includes a search bar, navigation links, and a list of related citations.

Content of the Collaborative

# Interactive by-criterion HTA report

## Links to quality assessments - example clinical data

	interventions limitations	syndrome.	limitations ○ 1 ○ 2 ○ 3 Major	<input type="checkbox"/> Low - specif
	<b>Intervention outcomes</b>			
11	Improvement of efficacy/ effectiveness	<p><b>4 placebo controlled RCTs</b>(2-year (toddlers) to 11-year treatments; N=42 to 104, 1 in Canada, 3 in USA): Final height of treated patients = 147 cm to 150 cm; difference with untreated = 7 cm</p> <p><b>Observational studies</b>(2-year to 8-year treatments, N=26 to 123, 1 in Germany, 1 in Greece, 1 in Israel, 3 in Italy): : Final height of treated patients = 148 cm to 151 cm; difference with controls = 2.1 to 6.8 cm. <a href="#">Example of critical analysis</a></p>	<p>○ 0 Lower efficacy/ effectiveness than comparators presented</p> <p>○ 1</p> <p>○ 2</p> <p>○ 3 Major improvement in efficacy/ effectiveness</p>	<input type="checkbox"/> Low - specif
12	Improvement of safety & tolerability	<p><b>Common AEs(from RCTs -frequency at least twice of placebo):</b> Surgeries (50%), ear problems (6 % to 47 %), joint (13.5%) and respiratory (11%) disorders, sinusitis (18.9%)</p> <p><b>Serious AEs(from registries, no control data):</b> Intracranial hypertension (0.2%), slipped capital femoral epiphysis (0.2 - 0.3%), scoliosis (0.7%), pancreatitis (0.1%), diabetes mellitus (0.2 to 0.3%), cardiac/aortic events (0.3%), malignancies (0.2%)</p> <p><b>Warnings:</b> Scoliosis, slipped capital femoral epiphysis, intracranial hypertension, ear disorders, cardiovascular disorders, autoimmune thyroid disease, insulin resistance.</p>	<p>○ 0 Lower safety / tolerability than comparators presented</p> <p>○ 1</p> <p>○ 2</p> <p>○ 3 Major improvement in safety / tolerability</p>	<input type="checkbox"/> Low - specif
13	Improvement of patient reported outcomes	<p>Inconclusive data:</p> <p><b>1 RCT</b>(2-year treatment data, N=28, Canada): higher rating on questionnaire by GH treated patients versus untreated for some domains but not for others</p> <p><b>2 observational studies:</b> no significant differences on SF-36 dimensions in one study (5-year treatment, N=568, France) and significant differences in another (7-year treatment, N=29, Holland); other questionnaires, non significant differences</p> <p><b>Convenience:</b> Subcutaneous injection 3 days a week or daily.</p>	<p>○ 0 Worse patient reported outcomes than comparators</p> <p>○ 1</p> <p>○ 2</p> <p>○ 3 Major improvement</p>	<input type="checkbox"/> Low - specif
	<b>Type of benefit</b>			
T1	Public health interest	No data on <b>risk reduction</b> with GH treatment.	○ 0 No risk reduction	

# Interactive by-criterion HTA report

## Quality of evidence assessment - overall clinical data

Relevance and validity – clinical data			
<b>Disease:</b> Turner Syndrome (TS) <b>Intervention:</b> recombinant human growth hormone (GH) <b>Setting:</b> Canada	<b>Series of key studies</b> <a href="#">Stephure et al, 2005</a> : Canada – <a href="#">See full assessment</a> <a href="#">Rosenfeld et al 1998</a> : US - <a href="#">See full assessment</a> <a href="#">Quigley et al 2002</a> : US - <a href="#">See full assessment</a> <a href="#">Davenport et al 2007</a> : US – <a href="#">See full assessment</a>		
Type of evidence	Question(s)	Rationale	
<b>Efficacy/safety data</b>	How relevant is the research program with regard to efficacy and safety? Are conclusions valid over the range of studies (conclusions across studies consistent or conflicting)? Are individual trials relevant and valid? <i>See assessment of individual studies below</i>	Overall, randomized controlled trials consistently demonstrate that GH treatment promotes height gain in girls with Turner Syndrome. Some uncertainty remains on extent to which GH may affect final height. High attrition rates were noted in the Canadian clinical trial ( <a href="#">Stephure 2005</a> ); 2 multiphase trials were missing a control arm (no GH treatment) and chose GH administration mode (frequency of injections) that did not correspond to current practice ( <a href="#">Rosenfeld et al. 1998</a> ; <a href="#">Quigley et al. 2002</a> ). Safety data monitoring is generally limited, despite the numerous warnings and AEs associated with GH treatment in Turner Syndrome populations. ( <a href="#">Humatrope PM. 2007</a> ; <a href="#">Saizen PM. 2007</a> ; <a href="#">Nutropin PM. 2006</a> ).	1 [ ] Low relevance/validity 2 [ ] 3 [X] 4 [ ] High relevance/validity

# Interactive by-criterion HTA report

## Quality of evidence assessment - excerpt single study

Relevance and validity – clinical data - study 1			
<b>Disease:</b> Turner Syndrome (TS) <b>Intervention:</b> recombinant human growth hormone (GH) <b>Setting:</b> Canada			<b>Study:</b> <a href="#">Stephure et al Canada 2005</a>
Type of evidence	Question	Rationale	Score
<b>Efficacy/safety data</b>	Is the study question relevant (choice of comparator, time horizon, patient population, and outcome)? Is the design appropriate (setting & design, sample size, patient allocation, analyses, statistics)? <i>See dimensions below</i>	This is the only study reporting final height (standard measure of GH effect; (Baxter et al. 2007) as the primary outcome. Although differences between GH treatment and no treatment are meaningful, high attrition rates, especially in the control arm (45%) might bias the study conclusions (Baxter et al. 2007). Authors report that supportive intent-to-treat analysis with conservative assumptions on missing data confirmed significance but no details are provided.	1 <input type="checkbox"/> Low relevance/validity 2 <input type="checkbox"/> 3 <input checked="" type="checkbox"/> 4 <input type="checkbox"/> High relevance/validity
Dimension	Question	Comment	
<b>1 Target population</b>	Is the target population relevant (age, gender, disease stage, comorbidities, inclusion criteria/exclusion criteria, setting etc)? Does it correspond to the actual population in which the intervention is envisioned to be used?	Target population is relevant and corresponds to the actual population in which the intervention is indicated: prepubertal Turner Syndrome girls (mean age: 10.3 ± 1.8 yrs; range: 7–13 yrs) with evidence of growth failure (height < 10th percentile) (Bondy 2007). Canadian setting but there is no mention of number and location of centers involved.	
<b>2 Intervention &amp; comparators</b>	Is the intervention in agreement with expected use? Does the choice of comparators reflect standard of care?	GH dose and schedule are in agreement with indication to treat short stature in Turner Syndrome girls (Humatrope PM. 2007; Saizen PM. 2007; Nutropin PM. 2006). Comparator is no treatment (standard of care).	
<b>3 Outcome measures</b>	Are the selected outcomes measures (efficacy, safety and PRO) relevant? Are rationales for outcomes selection valid? Are the instruments/methods/units used to measure outcomes (efficacy, safety and PRO) valid?	The primary outcome is final height (cm), which is the gold standard measure of GH effectiveness (Baxter et al. 2007). Other efficacy analyses are relevant to the assessment of short-term growth, and instruments/units used are valid: height age-specific Turner Syndrome standard deviation score (SDS; allows comparison to same population height) height adult Turner Syndrome	

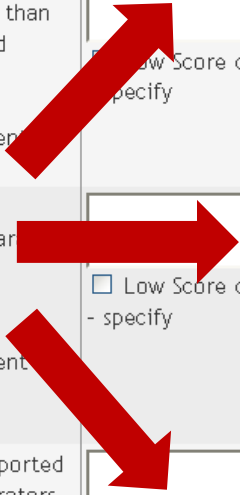


# Interactive by-criterion HTA report

## Capture uncertainty

Intervention outcomes	Intervention outcomes	Intervention outcomes	Intervention outcomes
11	Improvement of efficacy/ effectiveness	<p><b>4 placebo controlled RCTs</b> (2-year (toddlers) to 11-year treatments; N=42 to 104, 1 in Canada, 3 in USA): Final height of treated patients = 147 cm to 150 cm; difference with untreated = 7 cm</p> <p><b>Observational studies</b> (2-year to 8-year treatments, N=26 to 123, 1 in Germany, 1 in Greece, 1 in Israel, 3 in Italy): : Final height of treated patients = 148 cm to 151 cm; difference with controls = 2.1 to 6.8 cm. <a href="#">Example of critical analysis</a></p>	<p>○ 1</p> <p>○ 2</p> <p>○ 3 Major</p> <p>○ 0 Lower efficacy/effectiveness than comparators presented</p> <p>○ 1</p> <p>○ 2</p> <p>○ 3 Major improvement efficacy/effectiveness</p> <p><input type="checkbox"/> Low Score due to data limitation - specify</p>
12	Improvement of safety & tolerability	<p><b>Common</b> ear problems (18.9%)</p> <p><b>Serious A</b> slipped capital femoral epiphysis (0.2 - 0.3%), scoliosis (0.7%), pancreatitis (0.1%), diabetes mellitus (0.2 to 0.3%), cardiac/aortic events (0.3%), malignancies (0.2%)</p> <p><b>Warnings:</b> Scoliosis, slipped capital femoral epiphysis, intracranial hypertension, ear disorders, cardiovascular disorders, autoimmune thyroid disease, insulin resistance.</p>	<p>○ 2</p> <p>○ 3 Major improvement safety / tolerability</p> <p><input type="checkbox"/> Low Score due to data limitation - specify</p>
13	Improvement of patient reported outcomes	<p>Inconclusive data:</p> <p><b>1 RCT</b> (2-year treatment data, N=28, Canada): higher rating on questionnaire by GH treated patients versus untreated for some domains but not for others</p> <p><b>2 observational studies:</b> no significant differences on SF-36 dimensions in one study (5-year treatment, N=568, France) and significant differences in another (7-year treatment, N=29, Holland); other questionnaires, non significant differences</p> <p><b>Convenience:</b> Subcutaneous injection 3 days a week or daily.</p>	<p>○ 0 Worse patient reported outcomes than comparators</p> <p>○ 1</p> <p>○ 2</p> <p>○ 3 Major improvement</p> <p><input type="checkbox"/> Low Score due to data limitation - specify</p>
T1	Public health interest	No data on <b>risk reduction</b> with GH treatment.	○ 0 No risk reduction

**Specify evidence limitations**



# Value of innovation and uncertainty

→ Strike a balance using a framework



# Advantages

- ❖ Define & measure value
- ❖ Identify criteria at play in healthcare decisionmaking
- ❖ Allow simultaneous consideration of a wide range of criteria
- ❖ Stimulate reflection on perspectives, values and priorities
- ❖ Systematize judgment
  
- ❖ Transparent multidisciplinary evidence in a by-criterion HTA report
  
- ❖ Interactive

# Challenges

- ❖ Criteria selection
- ❖ Perception of complexity
- ❖ Integration in existing processes
- ❖ MCDA estimate may be used as a formula
  
- ❖ Perceived difficulty of breakdown of evidence by criteria

# Users & applications

Users	Applications
❖ Decisionmakers	
Policy (macro/meso)	<ul style="list-style-type: none"> <li>➤ Priority setting</li> <li>➤ Reimbursement (Advisory committees)</li> </ul>
Physicians & healthcare professionals	<ul style="list-style-type: none"> <li>➤ Clinical practice guidelines (CPGs)</li> <li>➤ Seamless access to evidence</li> </ul>
Patients	<ul style="list-style-type: none"> <li>➤ Access to digested &amp; validated information</li> </ul>
❖ HTA developers	<ul style="list-style-type: none"> <li>➤ HTA report at criteria level</li> <li>➤ Web-based multilevel evidence</li> </ul>
❖ Research	<ul style="list-style-type: none"> <li>➤ Identify research questions/data needs</li> <li>➤ Research planning</li> <li>➤ Explore the decisionmaking process</li> </ul>
❖ Developers of new healthcare interventions	<ul style="list-style-type: none"> <li>➤ Gap analysis</li> <li>➤ Positioning</li> </ul>
❖ All	<ul style="list-style-type: none"> <li>➤ Communication (evidence and values)</li> <li>➤ Knowledge translation</li> </ul>

# Future developments

- ❖ **Collaborative studies/applications**

  - ⇒ Field testing & implementation

  - ⇒ Methodological development

- ❖ **Web registry**

  - ❖ Interactive open access web resources

    - ➔ Optimize resources, decisions, priority-setting and health

**Acknowledgments:** Active members for their  
contribution to the EVIDEM Collaboration

**Thank you**

[www.evidem.org](http://www.evidem.org)