

# **NeP SIG - May 27, 2009**

## **AGENDA**

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**A. Review of founding principles/objectives of NeP SIG**

**B. Future Meetings of Note**

**C. Project Updates**

**1. National NeP Database Study**

**2. Evidence – Based Guidelines –  
Non-pharm Approaches NeP**

**D. Future Projects**

**E. ACTION Ontario and People with NeP**

# **NeP SIG**

## **Founding Principles/Objectives**

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- **Advance our knowledge of the mechanisms and management of NeP**
- **Provide evidence-based guidelines for the management of NeP**
- **Transfer this knowledge to healthcare practitioners and society at large**
- **Raise awareness of NeP in the public domain**

# Future NeP Meetings of Note

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- **3<sup>rd</sup> International Congress on NeP(NeuPSIG)**  
**Athens, Greece May 27-30/10**
  
- **NeP SIG(IASP) – Orofacial Pain**  
**One day satellite meeting of World Congress – Montreal – Sunday Aug 28/10**



# ***Canadian NeP Database (CANePDAT)***

**A multi-centre cohort study to determine the longterm outcome of the management of neuropathic pain.**

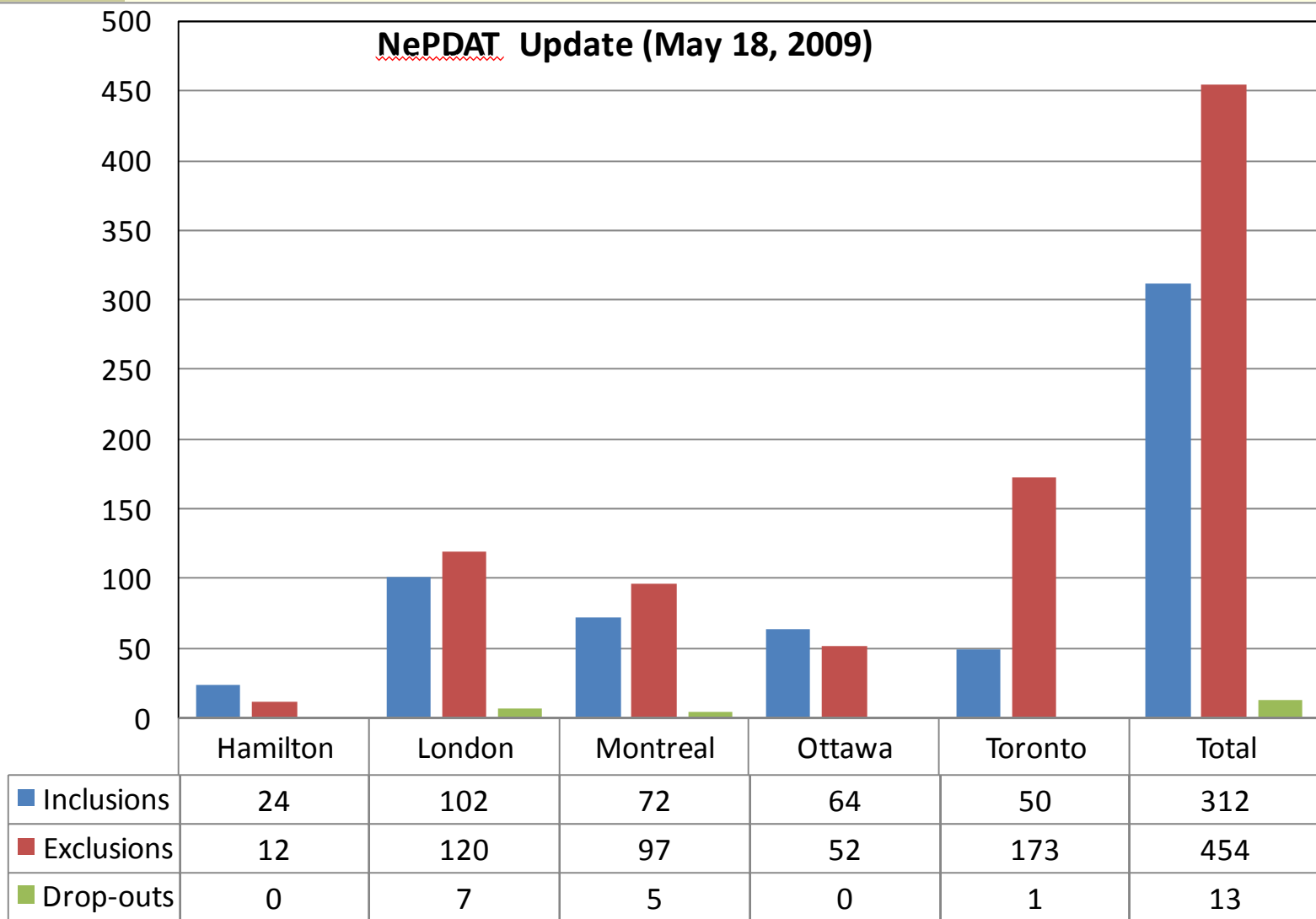
# Partnership – Regional NePDAT Study



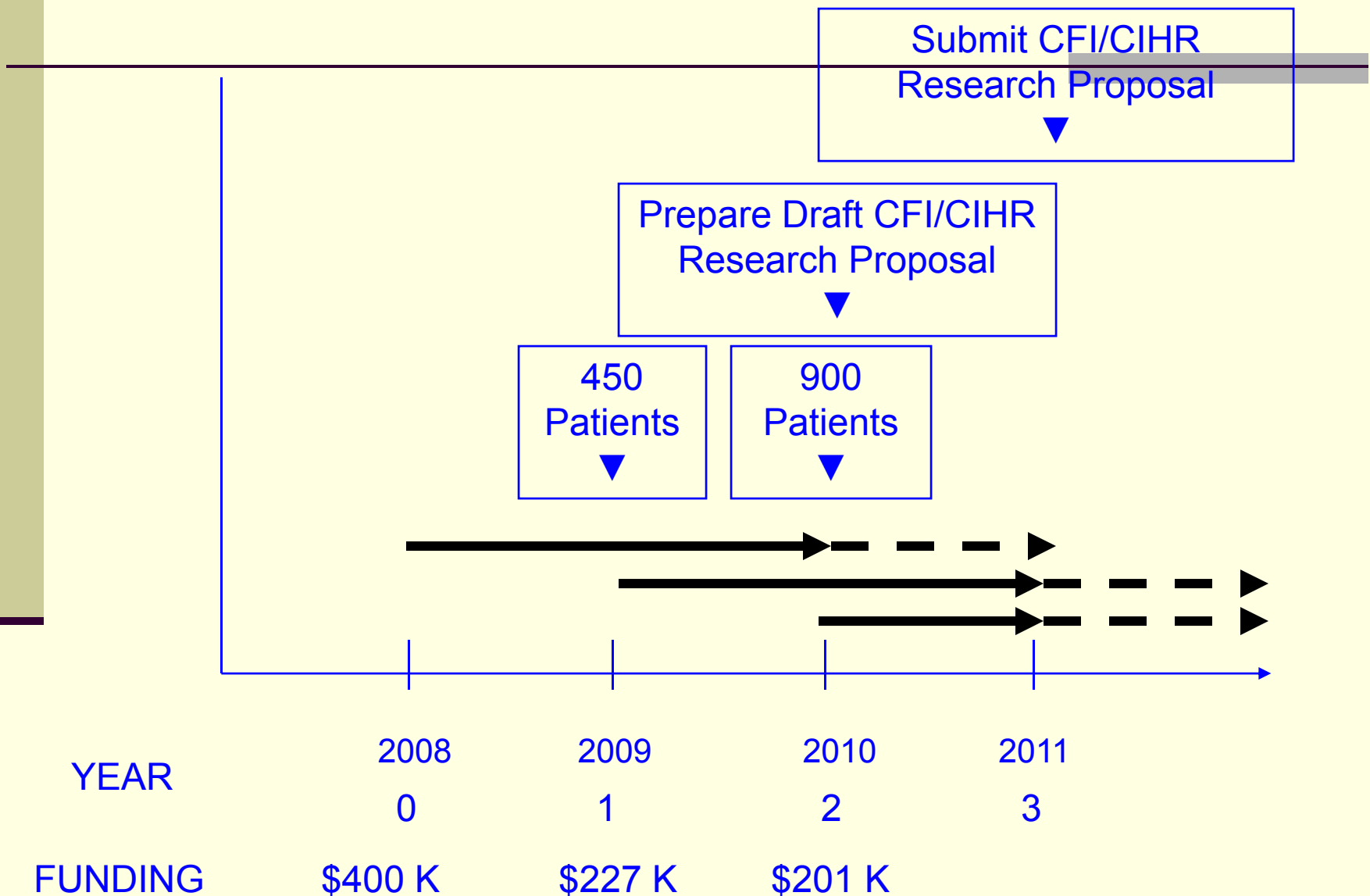
# *Partnership – National NePDAT Study*



### NePDAT Update (May 18, 2009)



# NeP Database Study - Timelines



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# Update on development of an EB guideline for treatments other than oral pharmacotherapy for NeP

Paul Taenzer  
Angela Mailis  
Neuropathic SIG, CPS  
May 2009, Quebec City

# Overview

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- Previous work: consensus guideline on oral medication for NeP
- Current project: EB guideline on other treatments for NeP
- Consensus Vs EB guidelines: what is the difference?
- Our progress to date
  - Which treatments?
  - Assembling the evidence
  - Draft recommendations
- What's next?

# Pharmacological management of chronic neuropathic pain - consensus statement and guidelines from the Canadian Pain Society

[Moulin DE](#), [Clark AJ](#), [Gilron I](#), [Ware MA](#), [Watson CP](#), [Sessle BJ](#), [Coderre T](#), [Morley-Forster PK](#), [Stinson J](#), [Boulanger A](#), [Peng P](#), [Finley GA](#), [Taenzer P](#), [Squire P](#), [Dion D](#), [Cholkan A](#), [Gilani A](#), [Gordon A](#), [Henry J](#), [Jovey R](#), [Lynch M](#), [Mailis-Gagnon A](#), [Panju A](#), [Rollman GB](#), [Velly A](#); Canadian Pain Society.

[Pain Res Manag.](#) 2007 Spring;12(1):13-21.

Neuropathic pain (NeP), generated by disorders of the peripheral and central nervous system, can be particularly severe and disabling. Prevalence estimates indicate that 2% to 3% of the population in the developed world suffer from NeP, which suggests that up to one million Canadians have this disabling condition. Evidence-based guidelines for the pharmacological management of NeP are therefore urgently needed. Randomized, controlled trials, systematic reviews and existing guidelines focusing on the pharmacological management of NeP were evaluated at a consensus meeting. Medications are recommended in the guidelines if their analgesic efficacy was supported by at least one methodologically sound, randomized, controlled trial showing significant benefit relative to placebo or another relevant control group. Recommendations for treatment are based on degree of evidence of analgesic efficacy, safety, ease of use and cost-effectiveness. Analgesic agents recommended for first-line treatments are **certain antidepressants (tricyclics) and anticonvulsants (gabapentin and pregabalin)**. Second-line treatments recommended are **serotonin noradrenaline reuptake inhibitors and topical lidocaine**. **Tramadol and controlled-release opioid analgesics** are recommended as third-line treatments for moderate to severe pain. Recommended fourth-line treatments include cannabinoids, methadone and anticonvulsants with lesser evidence of efficacy, such as lamotrigine, topiramate and valproic acid. Treatment must be individualized for each patient based on efficacy, side-effect profile and drug accessibility, including cost. Further studies are required to examine head-to-head comparisons among analgesics, combinations of analgesics, long-term outcomes, and treatment of pediatric and central NeP.

# **EB guideline for treatments other than oral pharmacotherapy for NeP**

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**Evidence-based vs. Consensus guidelines**

**What's the difference?**

# CONSENSUS BASED GUIDELINES VS EVIDENCE-BASED GUIDELINES

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## CONSENSUS-BASED

- Task is mandated
- Membership is selected
- Panel negotiates re: issues and solutions
- Expert consultation/research
- Draft prepared
- Review and revision
- Finalization, and dissemination

## EVIDENCE-BASED

- Task is mandated
- Membership is selected
- Peer input re: issues
- Strategy chosen, instruments/criteria
- Search
- Quality assessment and final selection
- Data extraction and analysis
- Interpretation and draft MSS
- Peer review and revision
- Finalization, dissemination

# ADVANTAGES and DISADVANTAGES OF CONSENSUS GUIDELINES

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- Collection of expertise in problem in which literature is scanty
- (rare conditions, new procedures, lack of controlled studies, urgent needs for guidelines)
- Relatively short "gestation" - quick response is possible
- Opinion from respected leaders in field
- Potential for bias by selection of the experts who happen to be on the panel
- Opinions become dated without a procedure for revision after a period of time
- Authority, and weighting of relative importance of opinions, is unstandardized
- No standard to judge between conflicting consensus guideline documents

# ADVANTAGES and DISADVANTAGES OF EVIDENCE-BASED GUIDELINES

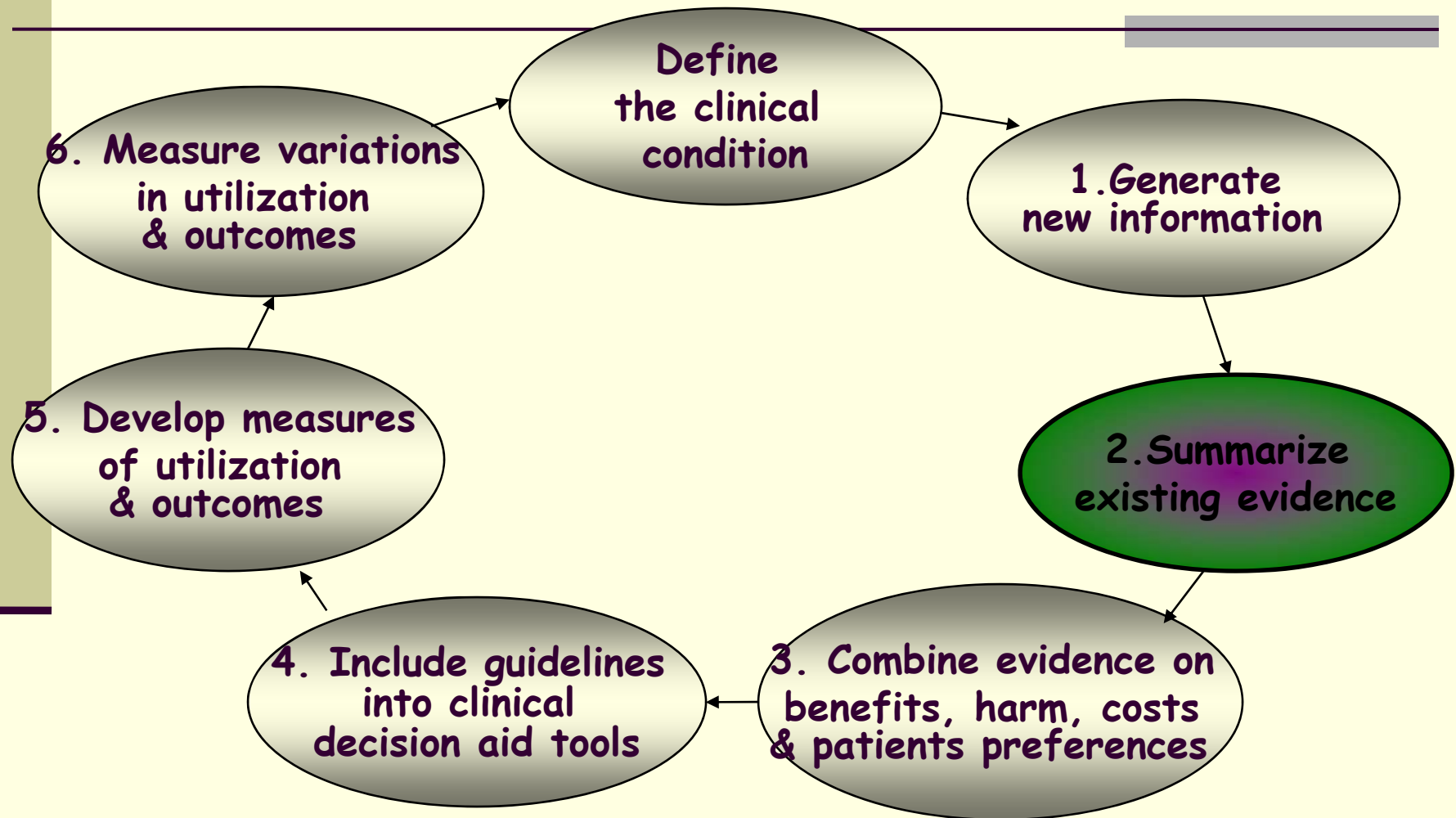
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- Author bias can be minimized
- Strength/quality of evidence is verifiable
- By summarizing across studies, "power" of results conclusions is increased
- Data base can be updated, using the same method, as new evidence becomes available
- External and verifiable standard exists for independent evaluation of methodology, results, and conclusions, and for critically comparing one systematic review (or guideline) with another
- Requires expertise in "systematic review"
- Costly in time and resources
- Much longer "gestation", slower response time
- Not all important issues have a body of quality clinical studies
- Strength of evidence is limited by quality of located studies
- Only data that can be summarized across studies is suitable. Some useful data and studies are excluded.
- Methodology leads to very conservative estimates.

# Our approach

- Survey CPS members views on which treatments are most important
  - Spring 2007
  - N=176 (91 MD; 27 RN; 27 Ψ; 12 PT)
  - Results:
    - Cognitive behavioural treatments
    - Nerve blocks
    - Acupuncture
    - TENS
    - IV Infusions
    - Spinal nerve stimulators
    - Sympathetic blocks
    - Epidural blocks
- Volunteer panel of CPS members created

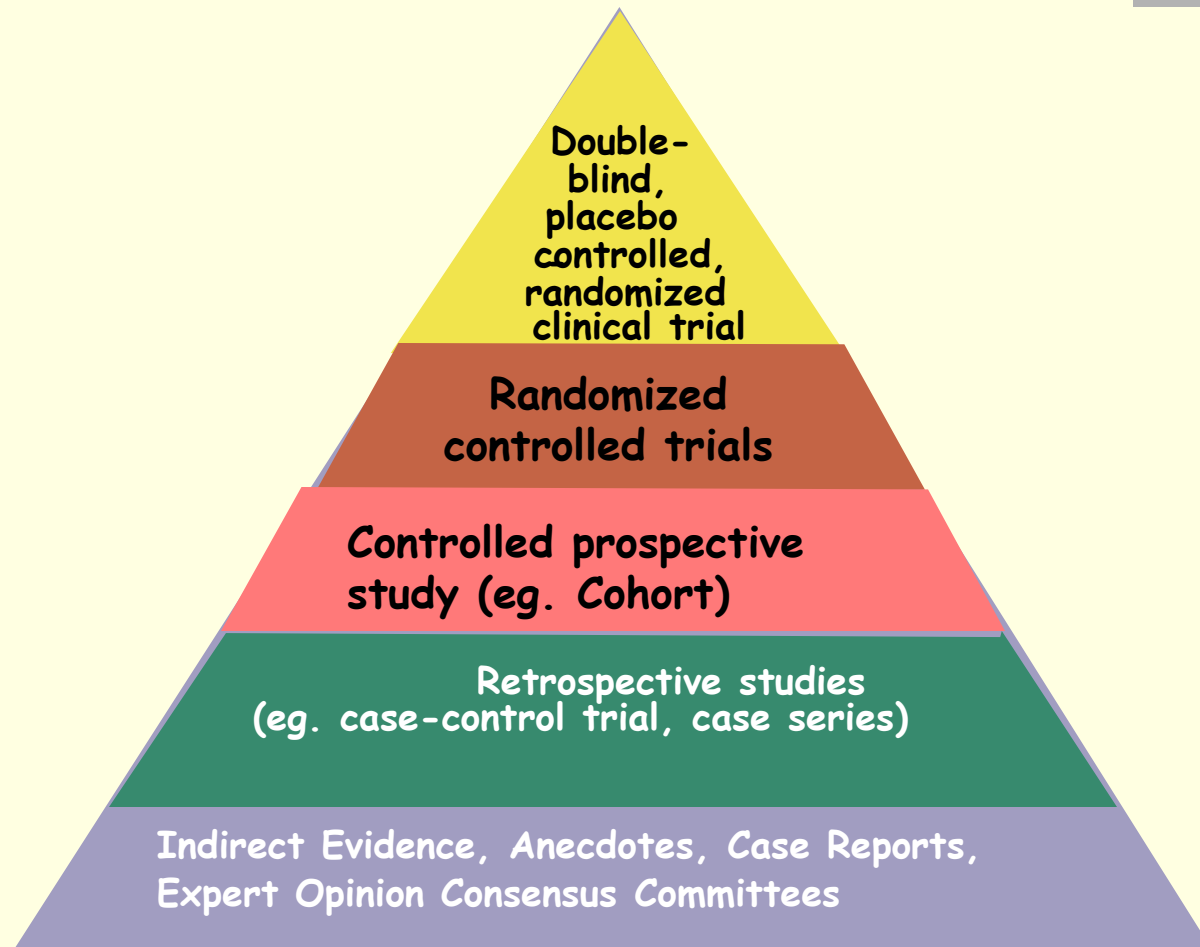
# Evidence-based Practice



Claire Bombardier, 2003

# The evidence

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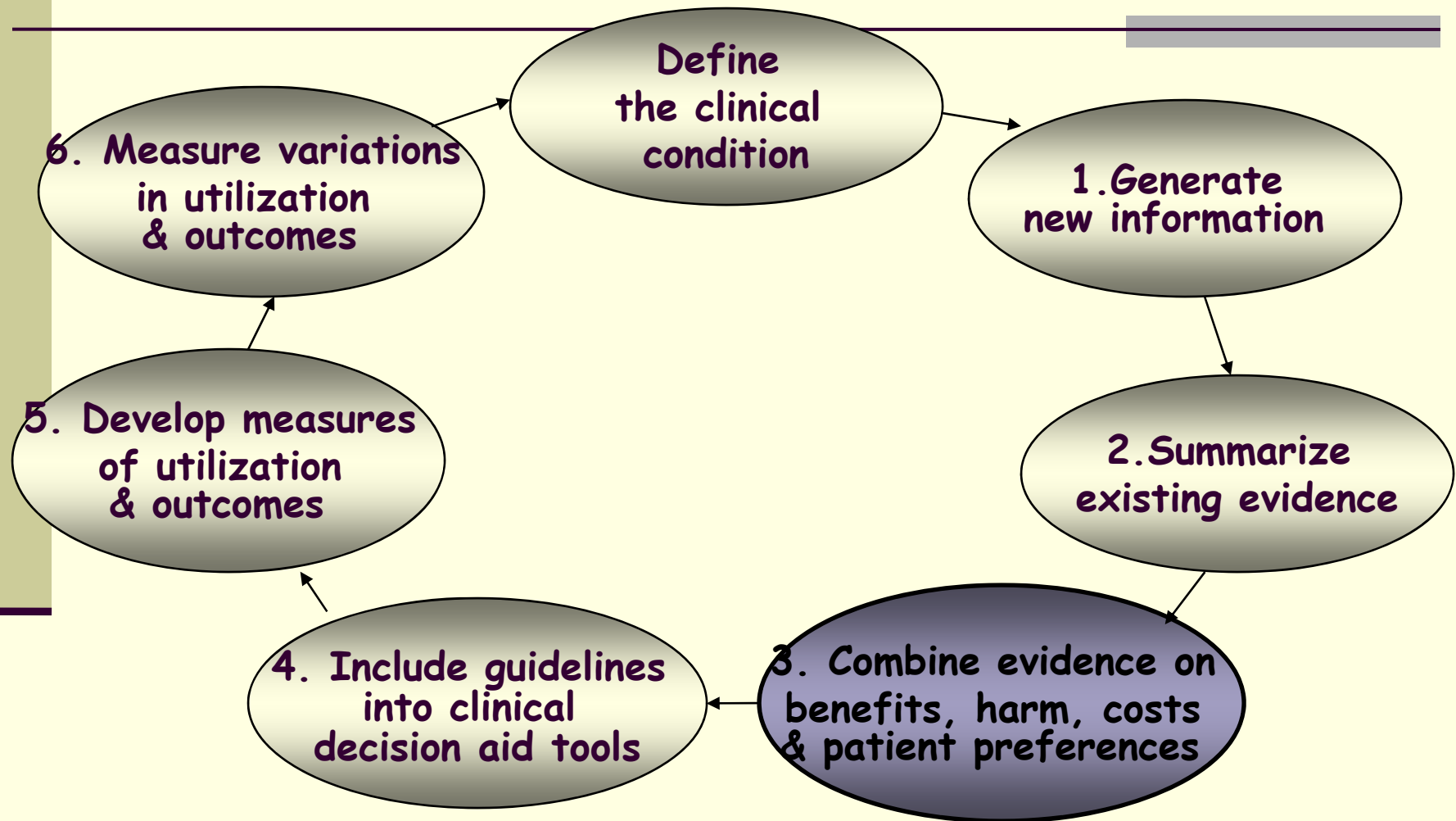


# Assembling the evidence

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- CPS engages the Health Technology Assessment (HTA) group from the Institute of Health Economics in Edmonton
- Review of available systematic reviews: insufficient evidence for CBT, TENS & Acupuncture
- Four HTA reports prepared:
  - SCS
  - IV infusions
  - Epidural Injections
  - Nerve blocks

# Evidence-based Practice



Claire Bombardier, 2003

# Getting from evidence to recommendations

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- Rating the:
  - Quality of the evidence
  - Strength of the recommendation
- Making the recommendations 'clinically useful'

# Quality of the evidence

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## Good:

Results must be consistent

The studies are well designed

The populations are representative

## Fair:

There is evidence of benefit but strength of evidence limited by number, quality or consistency of studies included or generalizability

## Poor:

Evidence is insufficient to assess effects on health outcomes because of limited number or power of studies, important flaws in design or conduct, etc.

# Strength of the recommendation

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**A= Recommend:** High certainty the net benefit is substantial.

**B= Recommend:** High certainty the effect is moderate or moderate certainty the effect is moderate to substantial

**C= May recommend** depending on circumstances (judgment etc). At least moderate certainty the net benefit is small.

**D= Recommend against:** Moderate or high certainty that there is no net benefit or that harm outweighs benefit.

**I= Current evidence insufficient for or against:** (poor quality of evidence, conflicting evidence, or benefits and harms can not be determined)

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# Summary of recommendations for SCS based on HTA review

<b>RECOMMENDATION</b>	<b>GRADE</b>	<b>Evidence used</b>	<b>SUGGESTION FOR PRACTICE</b>
<b>SCS is effective treatment for FBSS and CRPS (provided other treatments have been tried and there is no indication for surgery)</b>	<b>A</b>	<b>Good</b>	<b>Provide treatment</b>
<b>SCS is effective treatment for traumatic neuropathy and brachial plexopathy (provided other treatments have been tried and there is no indication for surgery)</b>	<b>B</b>	<b>Fair</b>	<b>Provide treatment</b>
<b>SCS is effective treatment for other types of pain</b>	<b>I</b>	<b>Poor</b>	<b>Can not make statement, lack of evidence</b>

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# Summary on recommendations for IV infusions based on HTA review

RECOMMENDATION	GRADE	Evidence used	SUGGESTION FOR PRACTICE
<p>IV Lidocaine at doses of 5-7.5 mg/kg of body weight may produce short term relief of pain and/or allodynia in some patients with neuropathic pain</p>	<p>B</p>	<p>Good</p>	<p>Provide treatment</p>
<p>IV Lidocaine may produce pain relief up to a few weeks in some patients with neuropathic pain</p>	<p>C</p>	<p>Fair</p>	<p>May recommend treatment depending on circumstances</p>
<p>IV biphosphonates seem to have a beneficial long term effect for CRPS</p>	<p>B</p>	<p>Good</p>	<p>Provide treatment</p>

<b>RECOMMENDATION</b>	<b>GRADE</b>	<b>Evidence used</b>	<b>SUGGESTION FOR PRACTICE</b>
IV Ketamine may have a short term beneficial effect on some neuropathic patients, especially CRPS I patients in in-hospital settings for up to one week, but with high level of adverse effects.	<b>B</b>	<b>Good</b>	<b>Provide treatment</b>
IV ketamine produces sustained relief of pain in some neuropathic patients if repeated frequently	<b>I</b>	<b>Poor</b>	<b>No evidence for or against</b>
IV opioids, amantadine, mannitol are not useful in neuropathic pain	<b>D</b>	<b>Fair</b>	<b>Recommend against</b>
IV magnesium is useful for some patients with neuropathic pain	<b>I</b>	<b>Poor</b>	<b>No evidence for or against</b>

# Panel review

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- 17 CPS members confirm interest
- Recommendations 're-linguaged' for clinical practice
- Feedback received from 6 panel members

# Feedback Format

## ■ Borrowed from the NOUGG:

Your review:

This recommendation is clear?

It would be feasible for me to follow this recommendation in my usual practice setting.

I support this recommendation.

Strongly	Disagree	Disagree	Neither	Agree	Agree	Strongly
	N/A		Nor			
			Disagree			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Do you have any comments about this recommendation, or information you would like to add? If you feel the recommendation lacks clarity, is not feasible, or you do not support it, what is your rationale? What changes would be necessary for you to support this recommendation?

# R1: IV Lidocaine

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IV lidocaine at doses of between 5 and 7.5 mg/kg of body weight may produce short term pain relief. (Grade B; evidence Quality: good)

Some patients with treatment resistant neuropathic pain may have pain relief of up to several weeks. (Grade C; evidence Quality: fair)

If a treatment trial produces only short term relief (less than 7 days) the clinical relevance of continued treatment is unclear.

Suggested revisions:

A minority of patients with treatment resistant neuropathic pain may have pain relief with intravenous lidocaine of up to several weeks. (Grade C; evidence Quality: fair)

There is no evidence that a treatment trial that produces short term relief (less than 7 days) will be associated with relief with continued treatments.

## R2: IV Biphosphonates

A trial of IV biphosphonates for patients with CRPS may produce long term (greater than 1 month) benefit and is a clinically viable treatment option for patients who have not responded adequately to less invasive options. (Grade B; Evidence Quality: good)

## R3: IV Ketamine

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While IV Ketamine may produce short-term benefit (less than 1 week) for some patients with neuropathic pain the level of adverse events is high. (Grade B; evidence Quality: good)

Given this risk versus benefit picture, IV Ketamine is not a clinically viable treatment option for these patients.

## R4: Long term treatment with IV Ketamine and IV Magnesium

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There is insufficient evidence to recommend for or against a trial of IV Ketamine or IV magnesium as a long term treatment option for neuropathic pain. (Grade I; Evidence Quality: poor)

## R5: IV opioids, amantadine and mannitol

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Available data indicate that IV opioids, amantadine and mannitol are not effective treatments for neuropathic pain and are not recommended. (Grade D; Evidence Quality: fair)

## R6: Failed Back Surgery Syndrome, CRPS, Traumatic Neuropathy and Brachial Plexopathy

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Research evidence strongly supports spinal cord stimulation treatment for patients with failed back surgery syndrome and CRPS who are not candidates for corrective surgery and who have failed more conservative evidence based treatment. (Grade A; evidence quality: good)

# R7: Traumatic Neuropathy and Brachial Plexopathy

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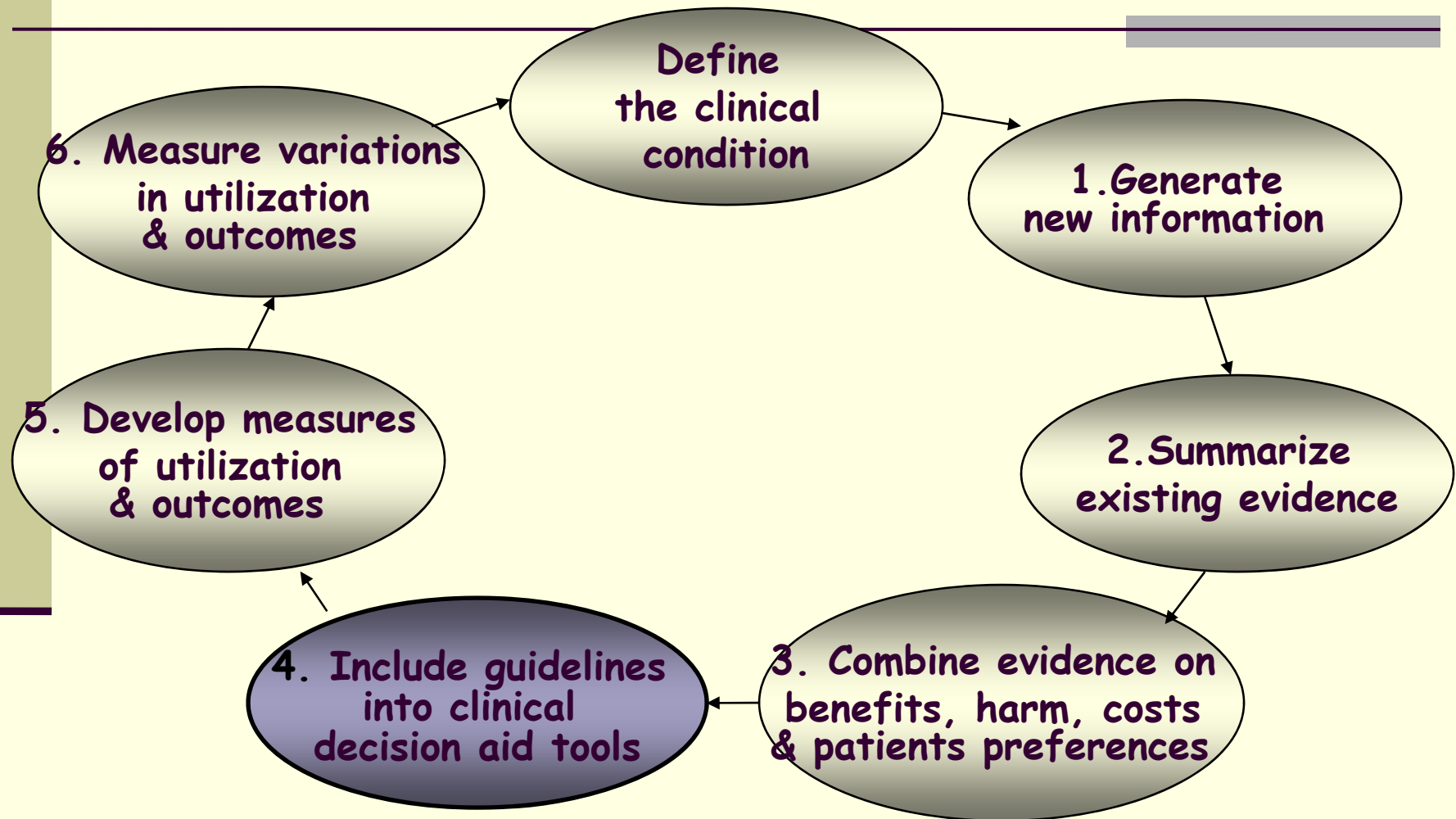
Research evidence supports spinal cord stimulation treatment for patients with traumatic neuropathy and brachial plexopathy who are not candidates for corrective surgery and who have failed more conservative evidence based treatment. (Grade B; evidence quality: fair)

## R8: Other Neuropathic Pain Syndromes

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There is insufficient evidence to recommend either for or against spinal cord stimulation treatment for patients with other neuropathic pain syndromes. (Grade I; evidence quality: poor).

# Evidence-based Practice (EBP)



Claire Bombardier, 2003

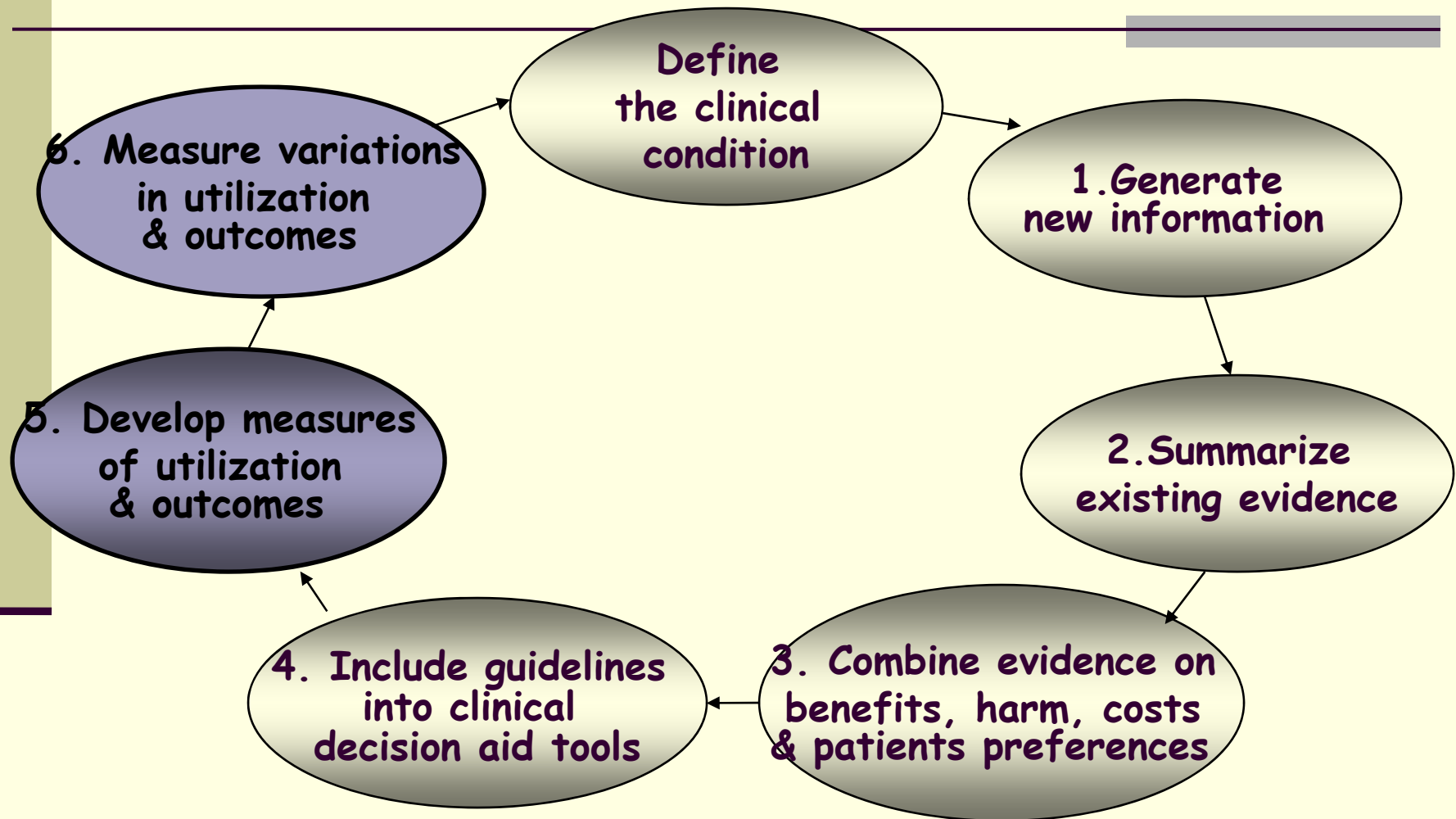
# What's next?

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- Draft recommendations for blocks and circulate to panel
- Draft full guideline including: target patients and professionals, interventions considered, methods: search, appraisal, consultation etc.
- Post on CPS website for feedback

# Future:

## Clinical improvements and accountability



Claire Bombardier, 2003



Thank you