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 ESCOLA SUPERIOR
DE SAÚDE DO ALCOITÃO
SANTA CASA da Misericórdia de Lisboa

Evidence Informed Practice

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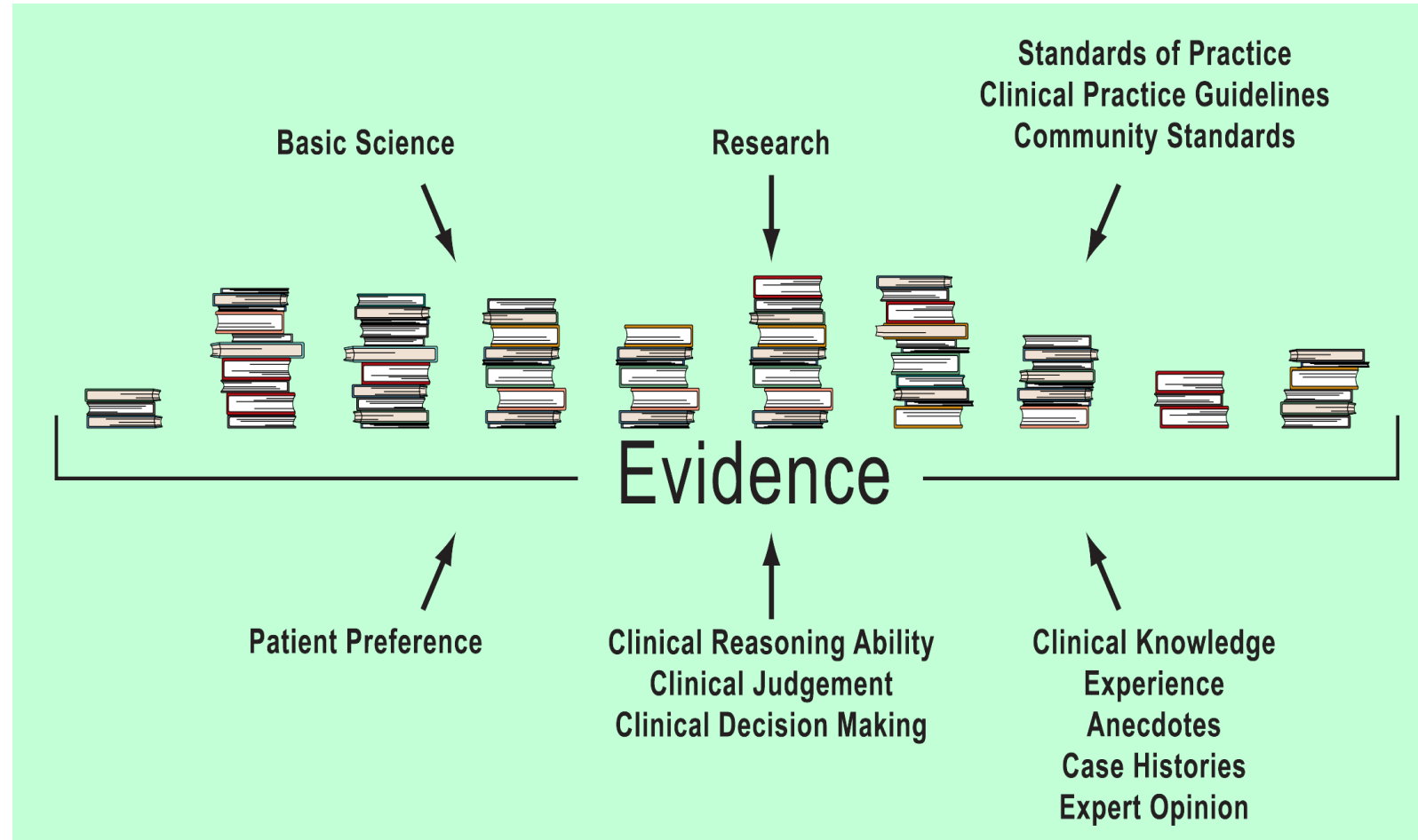
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 - ASSESS – Clinical Context
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- Ethical Implementation of Evidence

Concept

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Evidence-based Medicine (EBM)

“The conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients.”

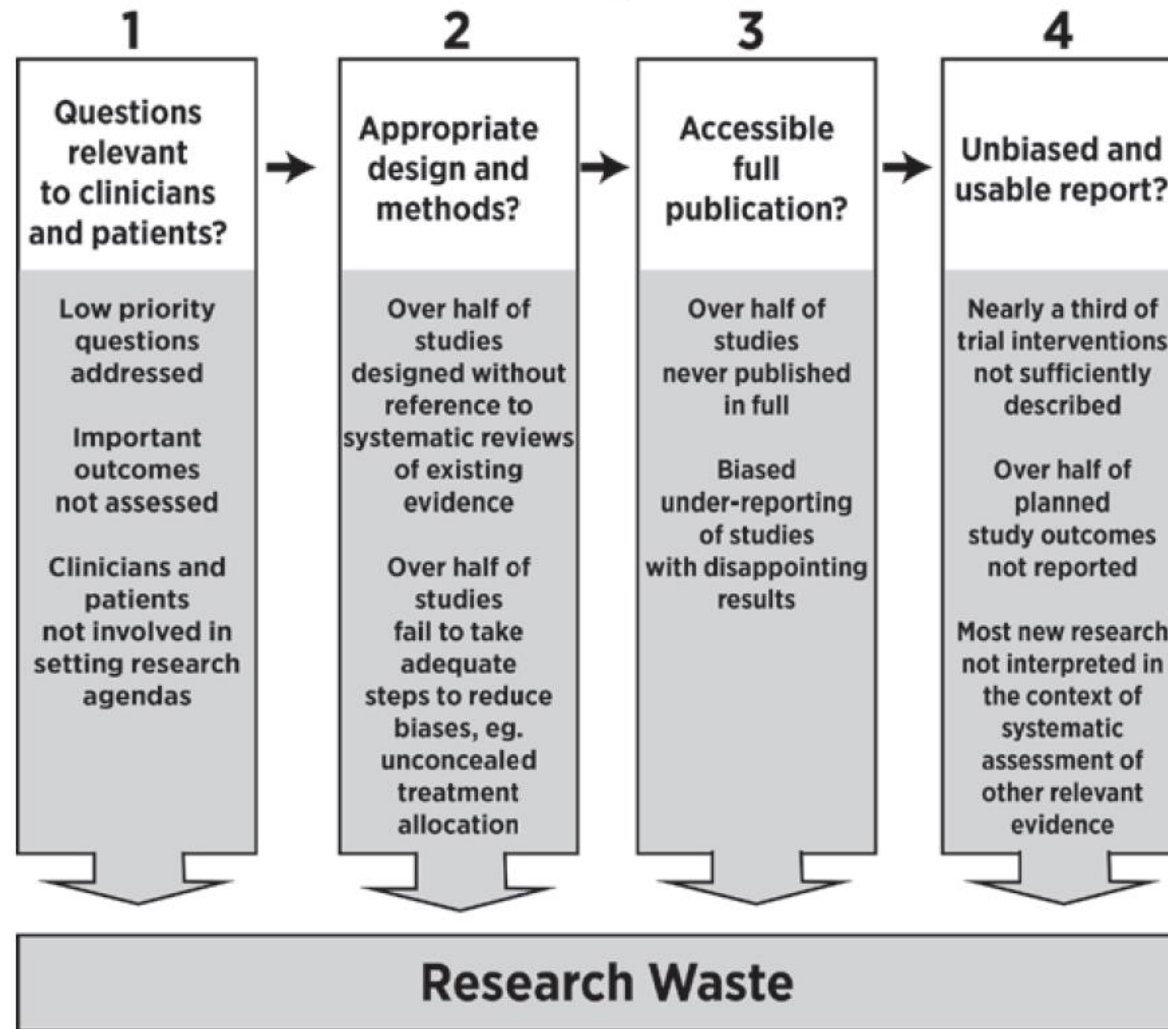
Sackett et al (BMJ 1996;312: 71-2)

Evidence Based Practice... Why?

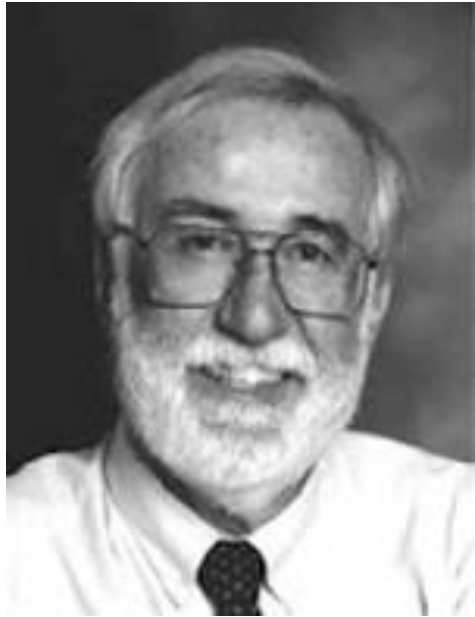
Box 1.1 The emergence of evidence-based practice (Trinder and Reynolds, 2000)

Research–practice gap	Slow and limited use of research evidence. Dependence on training knowledge, clinical experience, expert opinion, bias and practice fads.
Poor quality of much research	Methodologically weak, not based on RCTs, or is inapplicable in clinical settings.
Information overload	Too much research, unable to distinguish between valid and reliable research and invalid and unreliable research.
Practice not evidence-based	Clinicians continue to use harmful and ineffective interventions. Slow or limited uptake of proven effective interventions being available.

Waste at four stages of research



Evidence Based Practice



Evidence based practice is using best **research evidence** available along with **clinical expertise** and **patient values** to inform decisions regarding clinical practice.

(Sackett 1998, 2000)

Types of Evidence

Types of Evidence



Types of Evidence



Empirical evidence: derived from clinical research.

Types of Evidence



Experiential evidence: derived from personal clinical experience or the clinical experience of others (i.e. expert opinion).

Types of Evidence



Pathophysiologic rationale: based on underlying theories of physiology, disease and healing.

Types of Evidence



Patient values and preferences: derived from personal interaction with individual patients.

Types of Evidence



System features: including resource availability, societal and professional values, legal and cultural concerns.

Types of Evidence

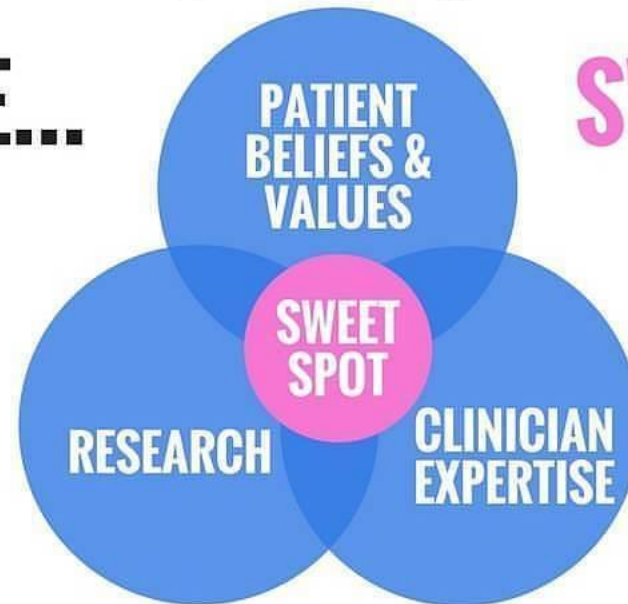
- **Empirical evidence:** derived from clinical research.
- **Experiential evidence:** derived from personal clinical experience or the clinical experience of others (i.e. expert opinion).
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- **Patient values and preferences:** derived from personal interaction with individual patients.
- **System features:** including resource availability, societal and professional values, legal and cultural concerns.

Tonelli (2004)

“EVIDENCE” BASED PRACTICE

@dr.caleb.burgess

FIND THE...



SWEET SPOT



USE **ALL 3** PILLARS

Evidence Informed Health Care

Evidence Based Physiotherapy

The practice of evidence-based physiotherapy should be informed by relevant, high quality clinical research, patients' preferences and physiotherapists' practice knowledge.

High quality
clinical research



Professional
knowledge



Patient
preferences



The practice of evidence-based physiotherapy

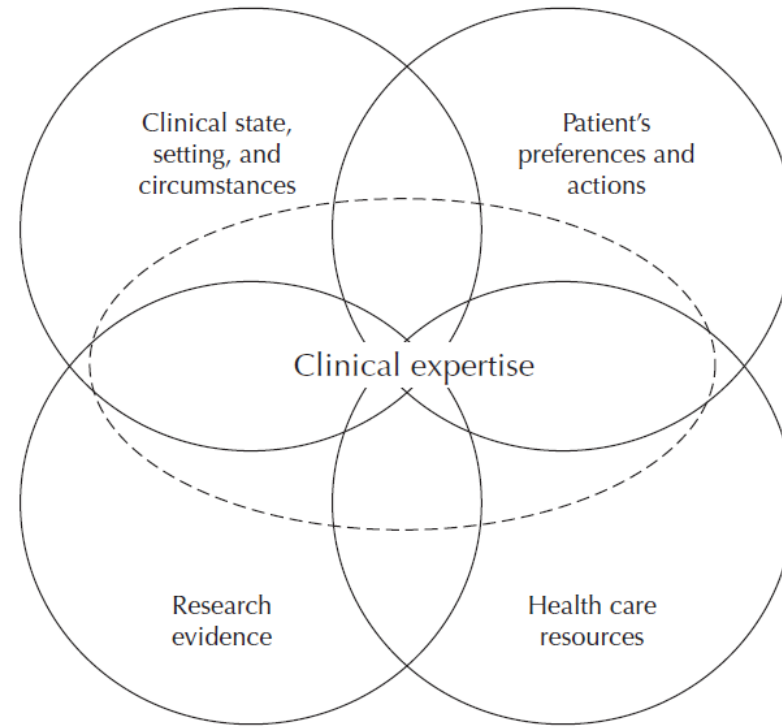
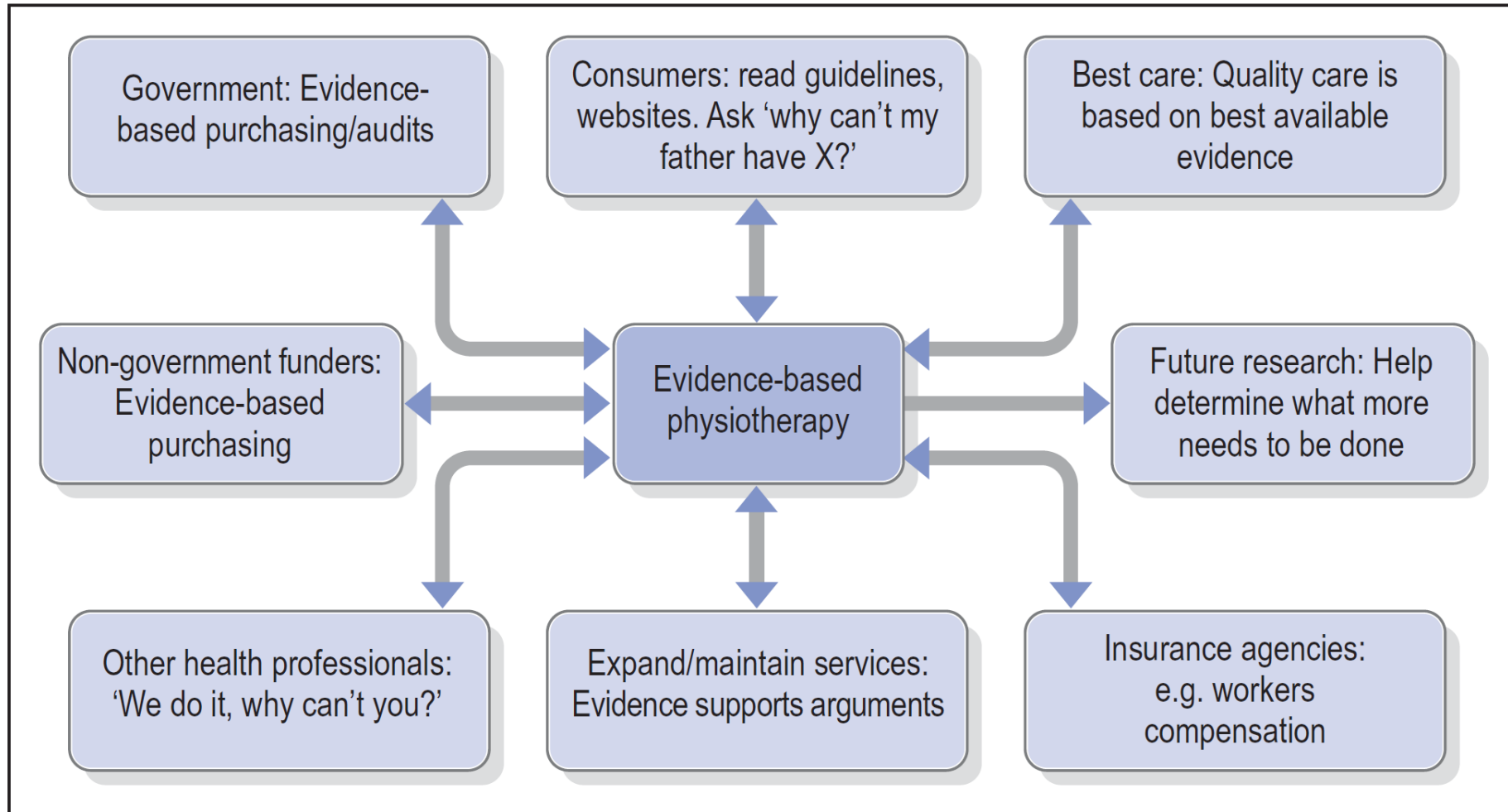


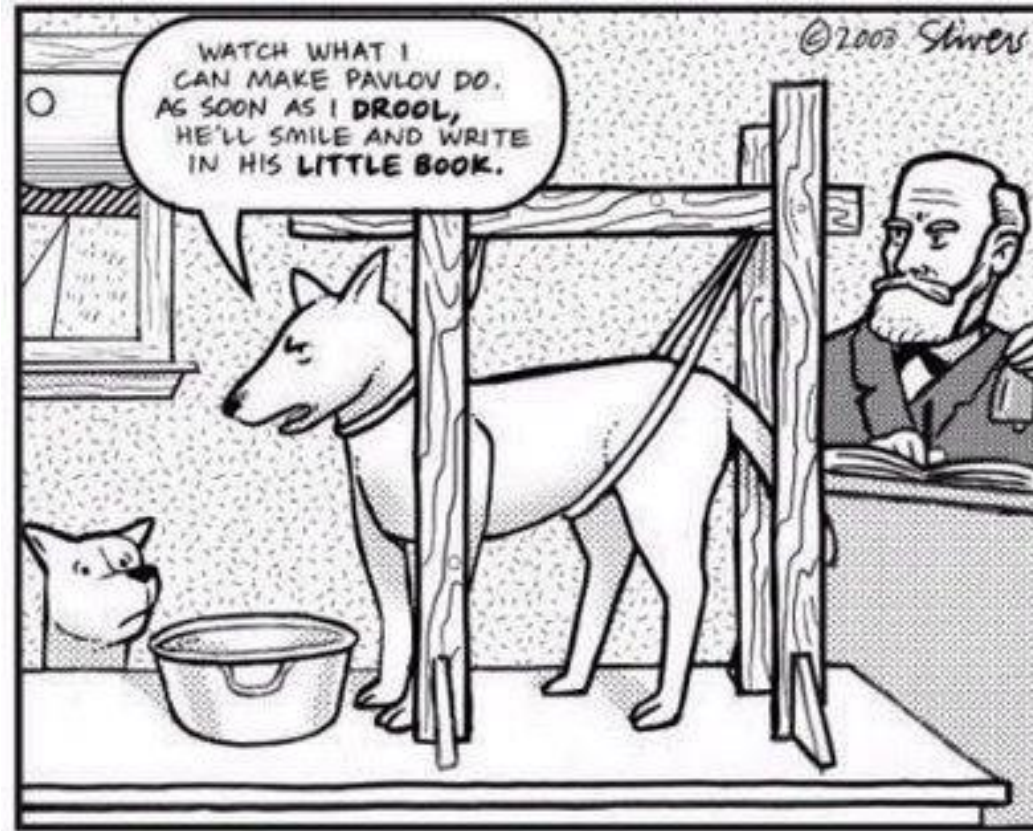
Figure 1.1 The interrelationship between evidence-based practice and clinical expertise (reprinted from Di Censo *et al.*, 2005, with permission from © 2005 Elsevier)

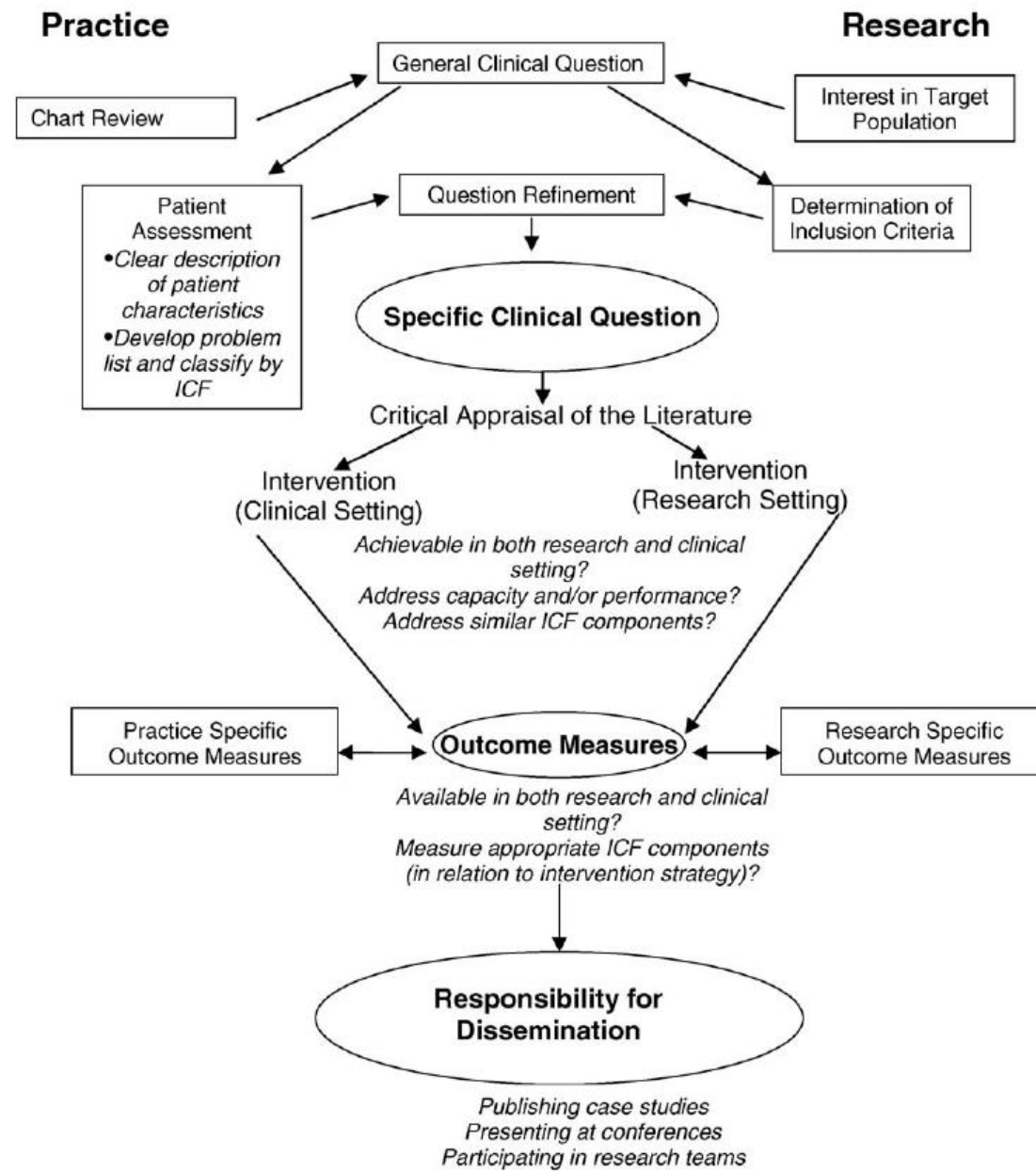
At the heart of the practice of evidence-based physiotherapy is the process of clinical decision-making. Clinical decision-making brings together information from high quality clinical research, information from patients about their preferences, and information from physiotherapists within a particular cultural, economic and political context.

Drivers of evidence-based physiotherapy

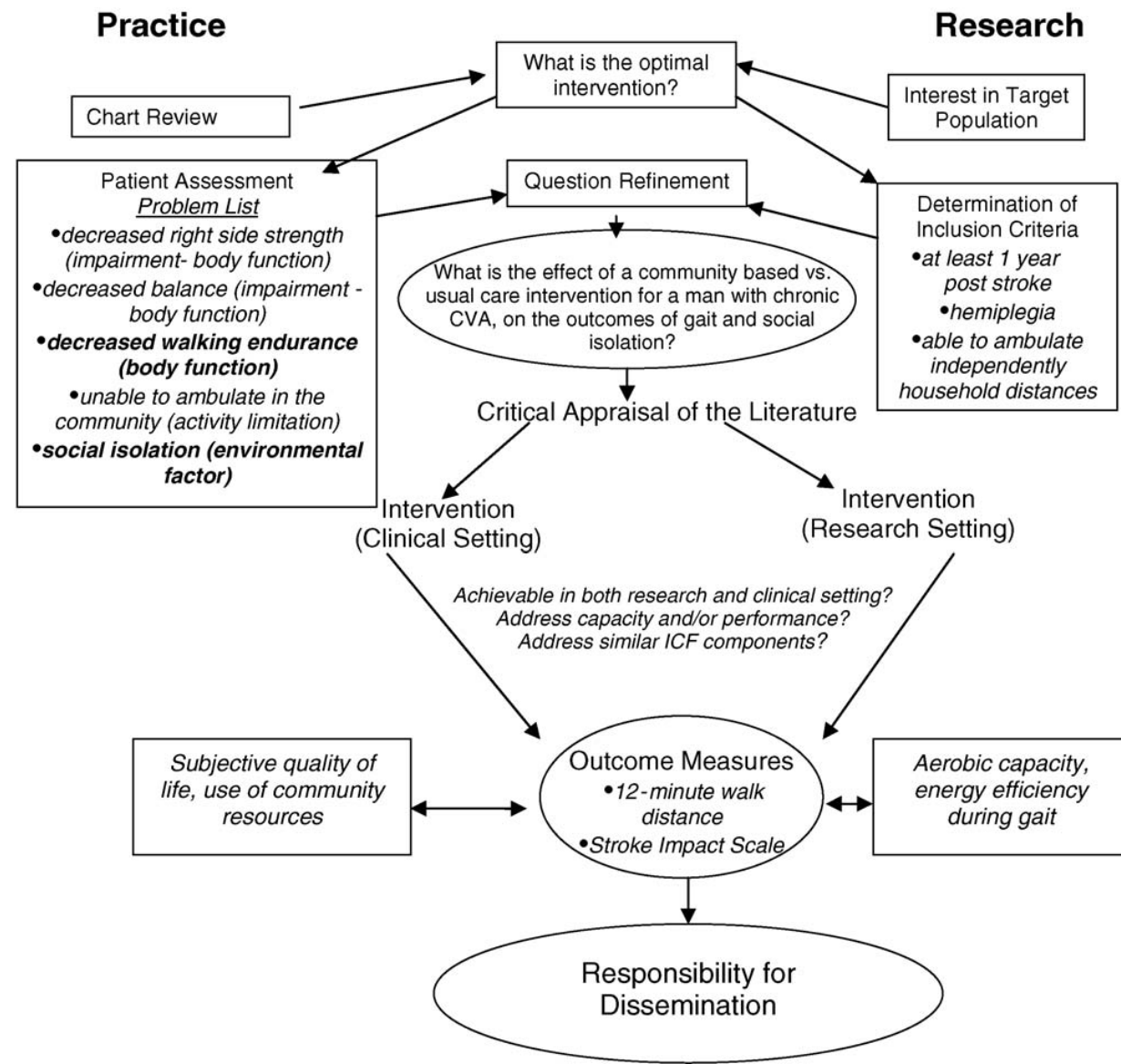


How do we implement it?





The RCPI model (2006)



The RCPI model (2006)

Research and Clinical Practice Integration (RCPI) model

The RCPI model illustrates linkages between research and clinical practice using the framework of the ICF:

- Development of a clinical/research question;
- Use of the ICF;
- Selection of outcome measures;
- Responsibility for dissemination

Application of Evidence in Health Care

- **Evaluation and diagnostic procedures;**
- **Fundamentals of Clinical Reasoning;**
- **Treatment procedures;**

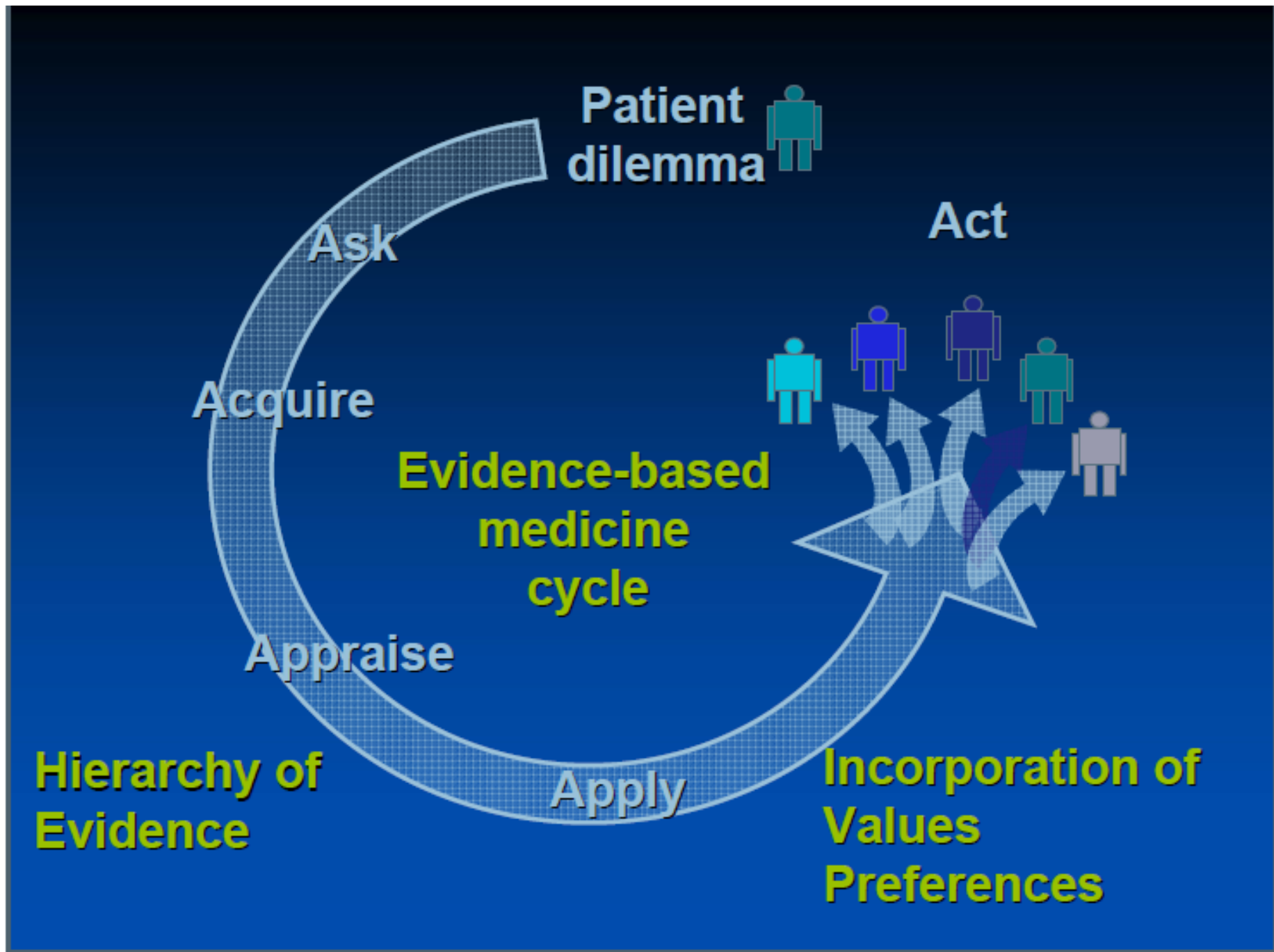
Table 1.4 Barriers to implementing evidence-based practice (adapted with permission from Grimshaw 2003).

Barrier	Example
Structural	Financial disincentives, policies
Organizational	Inappropriate staff skills, poor facilities or lack of equipment
Peer group	Local standard of care not in line with current practice, folklore well established
Individual	Wrong knowledge, attitudes or skills
Professional–patient interaction	Problems with information processing
Consumers	Wrong information

Table 1.5 Effectiveness of implementation strategies (summarized from Gross et al 2001).

Generally ineffective	Variably effective	Generally effective
Passive guideline dissemination	Audit and feedback	Reminders to clinicians
Publication of research findings	Local opinion leaders	Educational outreach, one-to-one teaching
Didactic (lecture style) education	Local consensus conferences	Interactive education
	Consumer education	Barrier-oriented interventions
	Involving patients in decision making	Multi-faceted interventions (using several of above strategies)

Evidence Implementation cycle



The five A's of the Evidence Cycle

- *ASSESS the patient and the problem*
- **ASK a clear, answerable question to be pursued**
- *ACQUIRE the evidence from an appropriate source.*
- *APPRAISE the evidence to further examine its worth and reliability.*
- *APPLY the evidence to the particular patient and their unique values and circumstances.*

P Patient Population

I Intervention or Issue

C Comparison intervention
(optional)

O Outcome of interest

Table 1.3 Using the PICO framework to develop a clear question.

	Patient, Population or Problem	Intervention	Comparison	Outcome
	What is the disease/condition that I am interested in?	Which intervention, therapy, treatment, test, procedure, am I interested in?	What is the alternative to the intervention (e.g. different therapy approach, placebo, drug)?	What can I hope to measure, accomplish, improve or affect?
Example	A 57-year-old man with post stroke shoulder pain	Transcutaneous Electrical Stimulation (TENS)	Non-steroidal anti-inflammatory drugs	Reduction in the intensity of pain experienced

The clinical question from this example would be:

‘Is TENS better than non-steroidal anti-inflammatory drugs at reducing the intensity of post stroke shoulder pain?’

PICOT Question

P – specific patient population of interest

I – intervention or issue of interest

C – comparison with another intervention/issue

O – outcome of interest

T – timeframe (optional)

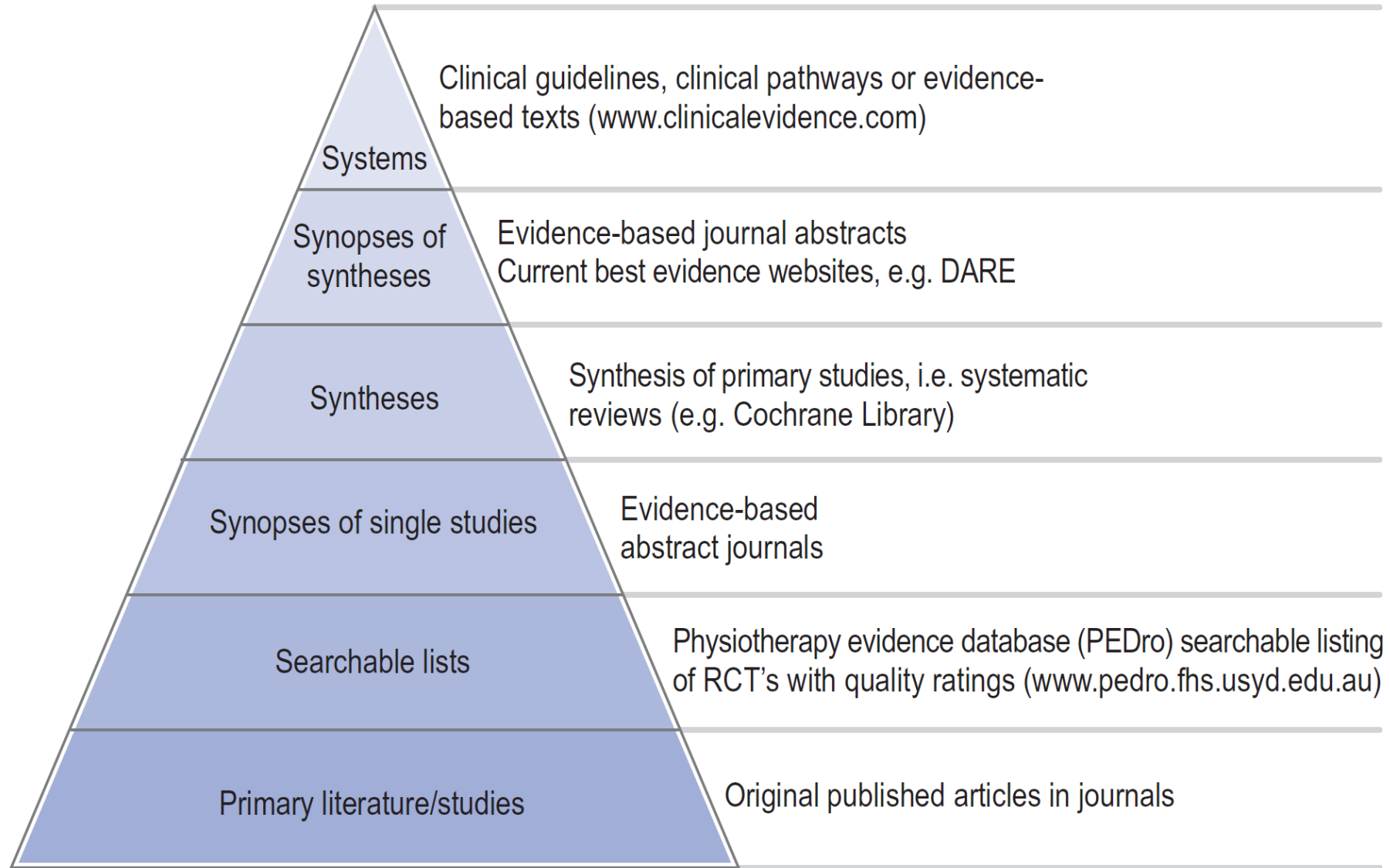
P.I.C.O. (T.T.) Model for Clinical Questions

P	Patient, Population, or Problem	How would I describe a group of patients similar to mine?
I	Intervention, Prognostic Factor, or Exposure	Which main intervention, prognostic factor, or exposure am I considering?
C	Comparison to Intervention (if appropriate)	What is the main alternative to compare with the intervention?
O	Outcome you would like to measure or achieve	What can I hope to accomplish, measure, improve or affect?
T	What type of question are you asking?	Therapy/Treatment, Diagnosis, Prognosis, Harm/Etiology (may be referred to as “ domains ” in PubMed)
T	Type of study you want to find	What would be the best study design/methodology?

Question	Best study designs*	Description
INTERVENTION	Randomised controlled trial (RCT)	Subjects are randomly allocated to treatment or control groups and outcomes assessed.
AETIOLOGY AND RISK FACTORS	Randomised controlled trial	As aetiology questions are similar to intervention questions, the ideal study type is an RCT. However, it is usually not ethical or practical to conduct such a trial to assess harmful outcomes.
	Cohort study	Outcomes are compared for matched groups with and without exposure or risk factor (prospective study).
	Case-control study	Subjects with and without outcome of interest are compared for previous exposure or risk factor (retrospective study).
FREQUENCY AND RATE	Cohort study	As above.
	Cross-sectional study	Measurement of condition in a representative (preferably random) sample of people.
DIAGNOSIS	Cross-sectional study with random or consecutive sample	Preferably an independent, blind, comparison with 'gold standard' test.
PROGNOSIS AND PREDICTION	Cohort /survival study	Long-term follow-up of a representative cohort.

* Descriptions of these study types are given in the 'Glossary' in Part 4 of this workbook. In each case, a systematic review of all the available studies is better than an individual study.

Examples



Ethical Implementation of Evidence

Ethical Principles Review

- **Respect for persons:** this principle recognizes individual autonomy and the right to self-determination
- **Beneficence/Non-Maleficence:** Maximize possible benefits, minimize possible harms

Preferences, Expectancies, & Values

- Preferences: differences in the perceived desirability of two (or more) healthcare options
- Expectancies: beliefs that a process or outcome possesses certain attributes
- Values: concepts or beliefs about desirable behaviors or states of being that are prioritized relative to one another

Self-Determination

- Informed Consent

- Formal conversations
- Unambiguous instructions
- Options
- Risks & benefits
- Voluntary decision

- Shared Decision-making

- Exchange of ideas
- Shared responsibility
- Culturally based preferences may take precedence

EBPT Approach

- Integrating:

- *INDIVIDUAL CLINICAL EXPERTISE*

with the

- *BEST AVAILABLE EXTERNAL CLINICAL EVIDENCE*

and with

- *PATIENT /CLIENT VALUES AND PREFERENCES*

Our Role..

- Understand the person AND their problem(s) (impairments in body structures/functions, activity limitations, participation restrictions)
- Use evidence – IN COMBINATION WITH:
 - Clinical theory
 - Biological plausibility
 - Expertise & judgment
- Engage the patient and partner with him/her in shared decision-making about the plan of care