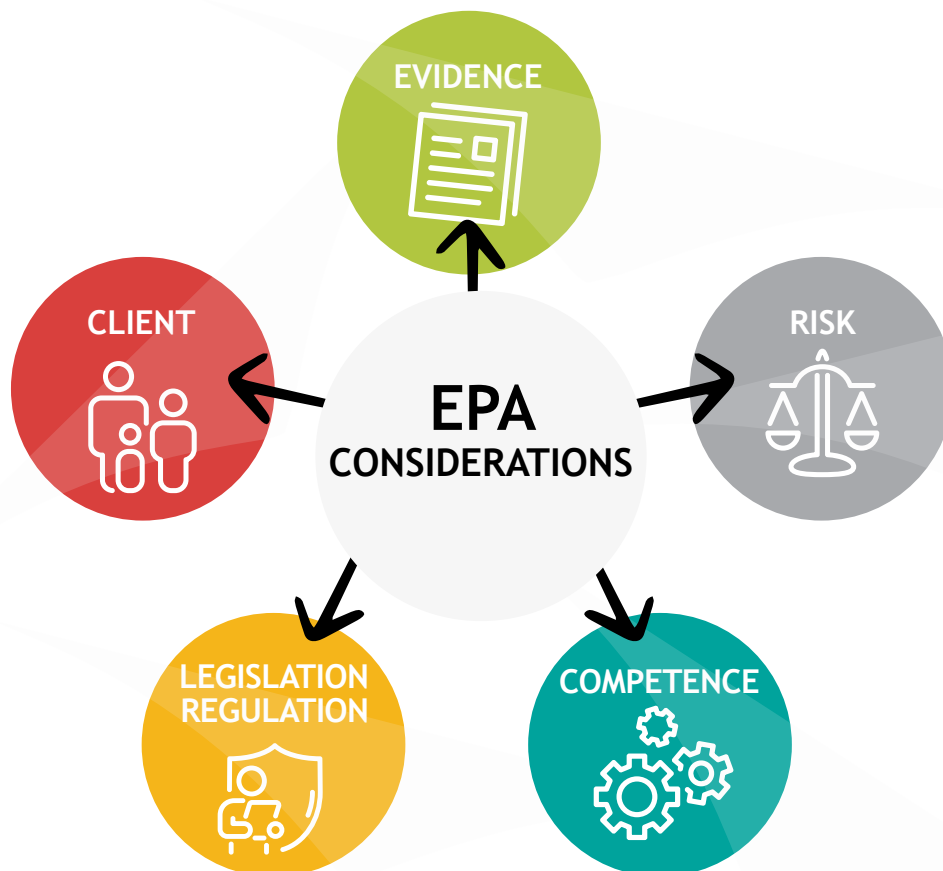


Emerging Electrophysical Agents -

Informed Decision-Making

As with many interventions, there are several factors to consider when contemplating whether to use an emerging electrophysical agent (EPA) with a client. The purpose of this resource is to support informed decision making, however, it is not a stand alone document – it should be used in conjunction with the considerations outlined in the “Is it PT?” tool and with the relevant College Standards of Practice. Physical therapy treatment decisions involving emerging EPAs can be complex and require consideration of factors related to both the EPAs and to the client. When considering the use of an emerging EPA, consideration must be given to evidence, risk, legislation and regulation, competence, and the specific client needs as shown in the diagram below.



EVIDENCE

The College Standard for Evidence-Informed Practice requires that the physical therapist:

- Critically appraises evidence relevant to the practice setting, population served, and available assessment and treatment options before integrating evidence into practice.
- Incorporates critically appraised physical therapy-related evidence into assessment and treatment plans.
- Integrates critical thinking and professional judgment into client-centered care, evaluating their practice in terms of client outcomes, and modifying approaches based on this self-reflective process.

When considering how to evaluate the evidence for an EPA, the five criteria listed below set out a useful framework for PTs (adapted from Robertson et al., 2006):

Criterion 1: The underlying theory justifying the use of an EPA must be sound and supported by appropriate biophysical, anatomical, and physiological evidence.

Criterion 2: How a modality is used or applied should be based on appropriate biophysical, anatomical, and physiological evidence.

Criterion 3: Evidence of potential risks should be ascertained prior to initial use and data should subsequently be actively collected and reviewed by independent researchers.

Criterion 4: Evidence of beneficial outcomes that justify the use of EPAs may be sought from the general scientific literature and must be sought in the clinical literature. Clinical studies should include people who have the condition for which a benefit is claimed. The methodologies used, while ideally randomized controlled trials, will also include others such as quality cohort studies, series of cases, single subject experimental designs and case studies.

Criterion 5: In clinical trials, client selection should relate to the expected effects of a modality and the outcomes should be assessed using relevant outcome measures.

Questions and considerations related to evidence:

- Is there evidence that this EPA is safe for this client?
- Are there any device-related contraindications to the proposed application?
- Is this EPA appropriate for this client? That is, can you explain the current understanding of the clinical evidence for the effectiveness of this EPA for this specific purpose (e.g., pain management, strengthening, wound healing, etc.) in this client? Can you explain the current understanding of the clinical evidence for the effectiveness of this EPA for specific conditions, what stage of healing, at what dose, for what duration of application, and for how many treatments?
- Are there any client-specific contraindications to the proposed application?
- Is there evidence this EPA is effective for this intended purpose?
- Does the evidence support the use of this EPA to help the client reach their physical therapy goal(s)?

Be cautious not to overvalue an encouraging clinical outcome in one client, or a recommendation from a colleague. While valuable, a treatment outcome, single study or anecdotal support for an emerging EPA should not be considered to carry the same weight as scientifically credible evidence. Confidence in treatment choices is contingent on a combination of studies or multiple sources of evidence (where available).

RISK

A critical component of obtaining informed consent from a client is disclosure of risks related to the proposed treatment plan. With respect to the potential risks related to an EPA, the physical therapist should consider and disclose:

- **Absolute risk** of EPA application e.g., risk of burn
- **Relative risk** of EPA application i.e., for this client under these conditions
- Seriousness of adverse reaction:
 - **Serious:** Potential adverse reaction could be catastrophic (e.g., cardiac dysfunction, fetal abnormality).
 - **Moderate:** Potential adverse reaction could be a major inconvenience for the client and could require medical attention; however, the reaction is temporary and not likely to compromise the client's overall medical health (e.g., deep skin burn, tissue necrosis).
 - **Minor:** Potential adverse reaction could be a minor inconvenience to the client and would resolve spontaneously (e.g., increased pain, superficial burn).

Questions and considerations related to risk:

- What are the device-related safety risks specific to the application of this EPA?
- What are the unique risks for the specific client being treated?
- What is the level of risk related to the application?
- Have risks been transparently disclosed to the client?
- If there was an adverse treatment outcome linked to the EPA, how would you demonstrate what had been done to reduce the likelihood of an adverse effect?

LEGISLATION & REGULATION

The College Standard for Risk Management and Safety requires that the physical therapist:

- Confirms that all equipment and electrophysical modalities are calibrated in accordance with manufacturer specifications.
- Retains documentation of equipment calibration and maintenance.
- Applies appropriate safety procedures when using equipment or electrophysical modalities.

Questions and considerations for the physical therapist related to risk management and safety:

- Does the use of this emerging EPA fit within the scope of practice for physical therapists in BC?
- Have you confirmed that the EPA has a Health Canada device license?
- Does the EPA bear a BC Safety Authority approved safety label?
- Is the application of this emerging EPA a restricted activity* in BC?
- What are the safety procedures specific to the client and related to the device that should be considered?

*The scope of practice for physical therapists is outlined in the Physical Therapists Regulation under the *Health Professions Act* (HPA). The Physical Therapists Regulation is one of a number of health profession-specific regulations under the HPA that are being updated by the Ministry to include restricted activities that the health profession will be authorized to perform under British Columbia's shared scope of practice restricted activities model.

COMPETENCE

The College Standard for Continuing Competence requires that the physical therapist:

- Practices within their level of competence and actively pursues continuous lifelong learning to maintain competence in existing and emerging areas of their physical therapy practice.
- Actively participates in self-directed learning to maintain competence in existing practice areas and to acquire competence in new and emerging areas of practice relevant to their practice setting and client population served.

Questions and considerations related to competence:

- Do you have the knowledge, skills, and ability/experience to apply the EPA safely and effectively?
- Do you know what dose to use, for how long, and under what conditions the EPA should be applied?
- Do you know what types of clients (who) and conditions (what) can be treated safely and effectively with this EPA?
- Is this EPA the only way to achieve the therapeutic goals? Or could these be achieved with existing (not emerging) modalities?

CLIENT

The College Standard for Assessment, Diagnosis, Treatment requires that the physical therapist deliver only services that are clinically indicated for the client.

Questions and considerations related to the client:

- Do assessment findings support the use of this EPA, for this client, and for their intended physical therapy goal(s)?
- What are the application parameters to best achieve the desired result with this client?
- Does the client know what to expect during treatment, and understand the potential risks and benefits of the EPA, and has the client consented to the use of the emerging EPA?
- Is the use of this EPA in the interest of the client and does it serve their treatment needs? Has the client been informed of any costs associated with using the EPA?
- Does the decision to use the EPA serve the client interest or does it better serve your interest (e.g., financial motivation, saves time).
- Is there an appropriate plan in place to monitor the response to treatment with the EPA?

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