

## CRITICAL APPRAISAL AND INTEGRATION OF EVIDENCE INTO HEALTHCARE PRACTICE

### AIM Physiotherapy Educational Program

#### FULL COURSE EXEMPTION POLICY

\*\* Entry-to-practice physiotherapy programs (MPT) will not meet the required standard. Masters or PhD training should have occurred following the entry-to-practice training and be aligned with a research thesis with a research question relevant to advanced MSK practice.

Academic Requirements – full-credit course (or two half credit courses)

Post-professional degrees - examples

Clinical Masters Advanced Health Care Practice – Comprehensive  
Musculoskeletal, Sport and Exercise Medicine, Upper Extremity Rehabilitation,  
Interdisciplinary Pain Management

Master of Science – Epidemiology

Doctorate (PhD) in a relevant field – Education, Health and Rehabilitation Science

Application Process

1. Submit course syllabus and academic transcript
2. Complete advanced competency assessment checklist
3. Submit any peer-reviewed publications relevant to advanced manual/musculoskeletal physiotherapy

Decision Process

Independent review by three AIM Education Committee Members

#### Background

**Capability** – The advanced manual/musculoskeletal physiotherapist engages with research, applying critical understanding of methodology to contribute to the advancement of musculoskeletal physiotherapy and continuously improve clinical practice through evidence-informed strategies.

## Learning Outcomes of Critical Appraisal Course

At the conclusion of this course, learners will be able to:

1. Define evidence informed practice (EIP) and recognize the three pillars of EIP and acknowledge the barriers and facilitators.
2. Recognize and write different types of clinical questions (therapy, harm, diagnostic test validity, Identification of prognostic/risk factors) and perform an effective search of the evidence.
3. Define and identify the measurement properties of outcome measures; reliability, validity and evaluating change and the clinical relevance.
4. Critically appraise the internal and external validity of different types of clinical research studies (intervention, harm, diagnostic test validity, systematic review, prognostic).
5. Interpret the precision of statistical findings as they relate to sample size, event rates, likelihood of random sampling error, and interpretation of confidence intervals.
6. Demonstrate an understanding of the different types of research study designs and the advantages and disadvantages.
7. Understand the derivation, validation, and clinical application of Clinical Prediction Rules.
8. Discuss Clinical Practice Guidelines and the implementation into advanced healthcare practice.
9. Understand the application of the GRADE criteria to a body of evidence.
10. Recognize the essential elements of qualitative research including the theoretical approaches, methodology and data analysis.

## Competencies Checklist (from Dimension 1 and Dimension 9 of IFOMPT Standards 2016)

Review the competency table and check off each competency you have achieved. For each checked competency, provide supporting evidence that demonstrates how you met each checked competency.

Knowledge	Evidence
Demonstrate critical and evaluative application of evidence informed practices relevant to the field of MSK practice through systematic clinical audit against the use of best practice/national and international guidelines, critically evaluating outcomes and implementing targeted modifications to optimize service delivery and patient care.	
Demonstrate critical and evaluative understanding of appropriate outcome measures e.g. data collection and analysis, satisfaction feedback and stakeholder engagement to improve quality of care, service delivery and health inequalities.	
Demonstrate critical understanding of research designs relevant to MSK practice, including strengths and weaknesses.	

<b>Skills</b>	
Demonstrate ability to retrieve, integrate and apply knowledge from the clinical, medical, and behavioural sciences in the clinical setting, recognizing the limitations of incorporating evidence into practice.	
Demonstrate ability to critically review the recent literature of the applicable sciences relevant to MSK dysfunctions/conditions, to draw inferences for MSK practice and present material logically in both verbal and written forms.	
Systematically evaluate and integrate emerging musculoskeletal research from diverse sources to optimize clinical practice and advance professional knowledge. Critically appraise methodology, synthesize findings, and translate evidence to inform both personal practice decisions and leadership of others in addressing complex clinical challenges in MSK physiotherapy.	
Demonstrate an evidence-informed approach to the assessment and management of persons with MSK conditions and the awareness of the complex impact of activity patterns on pain experience and influences on person's activity related habits.	
Demonstrate the ability to evaluate the results of treatment accurately and modify and progress treatment as required using evidence.	
Demonstrate the advanced use of outcome measures to evaluate the effectiveness of clinical interventions and services and uses outcomes to inform future planning and development.	
Demonstrate generation of a research question based on a critical evaluation of the current literature relevant to manual/musculoskeletal physiotherapy practice.	
<b>Behaviours</b>	
Demonstrate a critical and evaluative approach to all aspects of practice.	
Demonstrate critical awareness of the role of research in advancing the body of knowledge in MSK Physical Therapy.	