



29th Annual Gabor Racz
Advanced Interventional
Pain Conference and Workshop
Budapest, Hungary August 24-26, 2026

Training the Next Generation Do We Still Need "Traditional Fellowships?"

Prof. dr. Monique Steegers, MD, PhD
Amsterdam University, Medical Center
Amsterdam/Netherlands



29th Annual Gabor Racz Advanced
Interventional Pain Conference and Workshop
Budapest, Hungary August 24-26, 2026

Conflict of Interest

Full professor Amsterdam University Medical Centers, the Netherlands and head of the department Pain management and palliative care, part of Anesthesiology

Chair of the examination board FIPP CIPS

President chapter IASP the Netherlands, (PA!N)

Indepent Research grants Grunenthal, Viatrix

Independent government research grants from ZonMw, NWO,

In Memory of
Dr. Gabor B. Racz
1937–2025



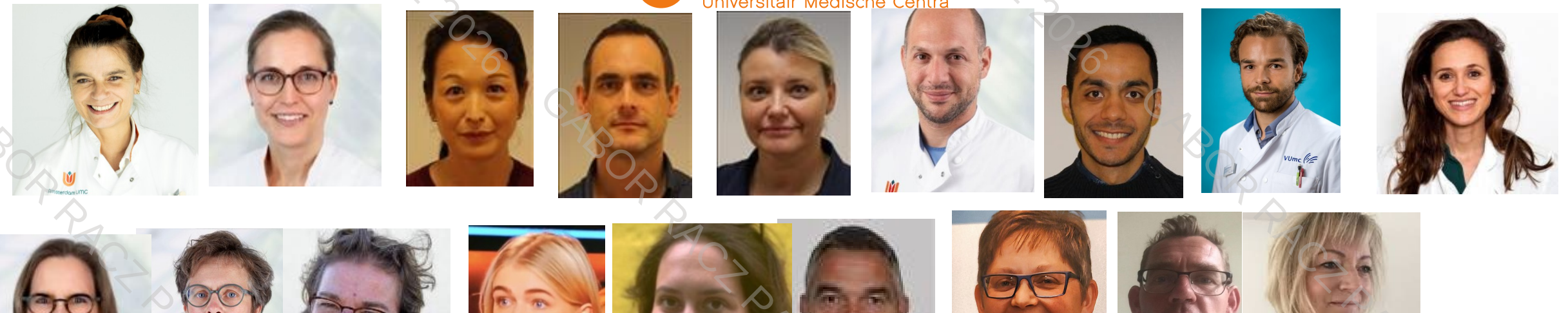


29th Annual Gabor Racz Advanced Interventional Pain Conference and Workshop

Thank you so much







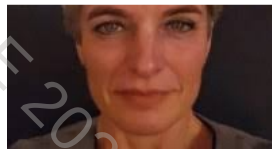
18 painspecialists+3 fellows + 5 pain residents:

13 FIPP

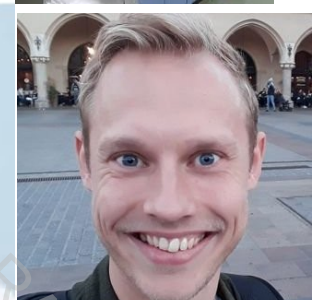
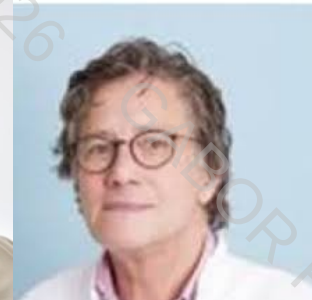
3 CIPS

3 EDPM

Natasja Klootwijk
Marisha
Vodegel



Eef van Duin
Medical Specialist,
Specialist,
Anesthesiology





Education changes
lives



Learning goals

1. Effective Learning

2. Effective Education

3. Effective examination: Improve FIPP and CIPS

Pupils in England are losing their thinking skills, research suggests

Two-thirds of secondary school pupils have lost core abilities such as writing and

Back to books - Sweden's schools cutting back on digital learning

15 April 2026

Share

Save

 Add as preferred on Google

Maddy Savage

Business reporter, Nacka, Sweden

THE RESULT IS THE MOST GENERATION less cognitively capable than their parents

AI 'slop' could cause cognitive decline and violent tendencies among kids, study says





OECD
PISA

Will science, reading and maths exam results continue to decline?

OECD average PISA scores in science, reading and maths



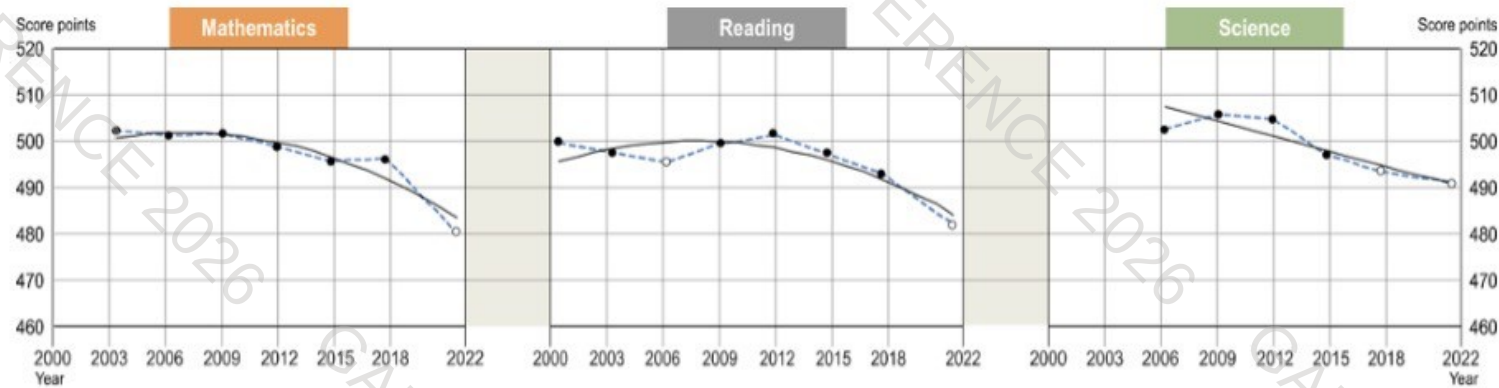
600 000 students

representing about **32 million** 15-year-olds
in the schools of the **79 participating**
countries and economies sat the **2-hour**
PISA test in 2018



Figure I.6.1. Trends in performance in mathematics, reading and science since the first PISA assessment

OECD average-23



AI IS MAKING OUR KIDS DUMBER

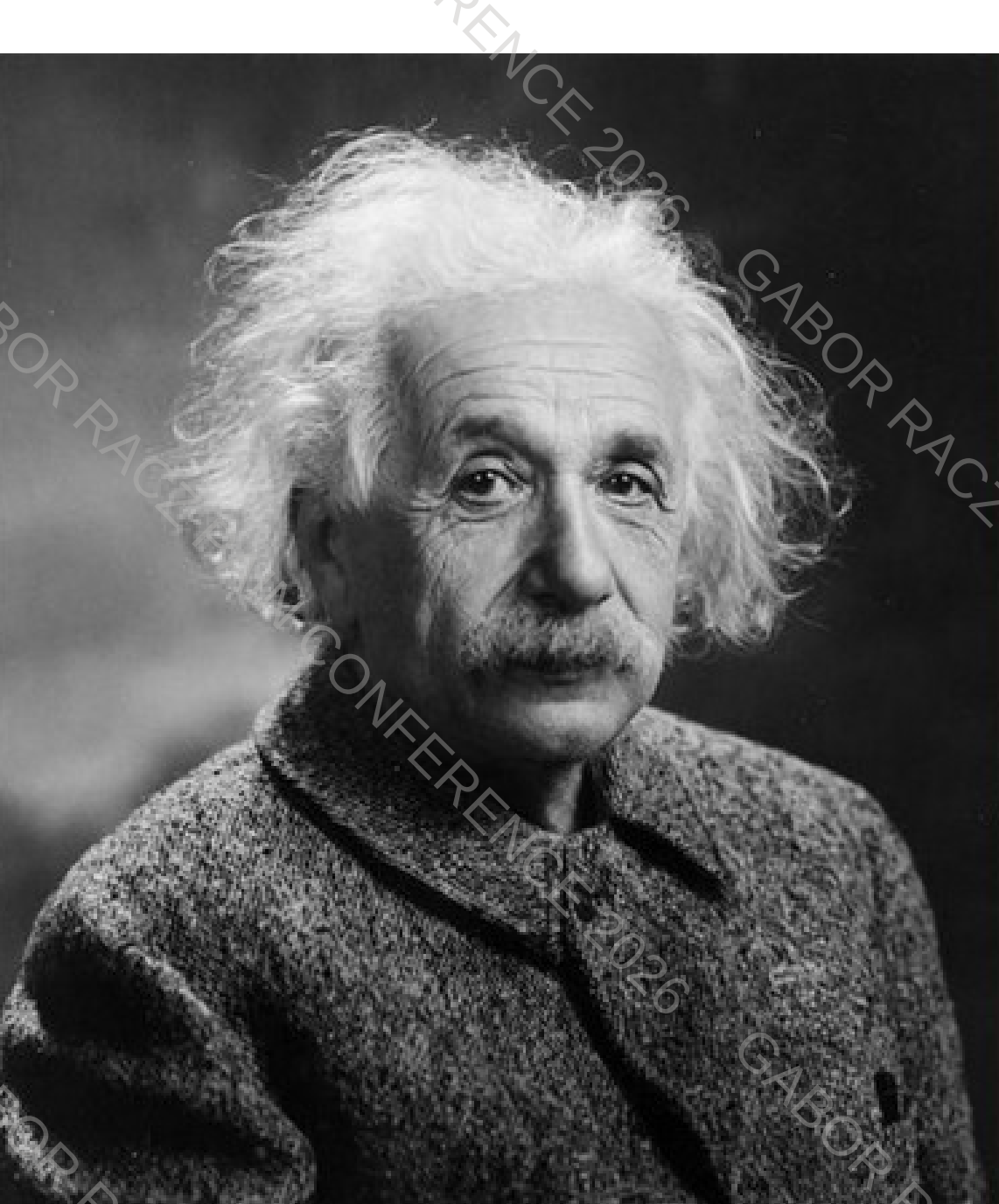
Grade School Kids vs Their Parents.



IS AI MAKING YOUR
KIDS DUMBER? OVER
HALF OF TEACHERS
SURVEYED SAY IT
MAY BE

Illustration: Getty Images

W THE WESTERN JOURNAL



“Once
you
stop learning,
you
start dying.

ALBERT EINSTEIN

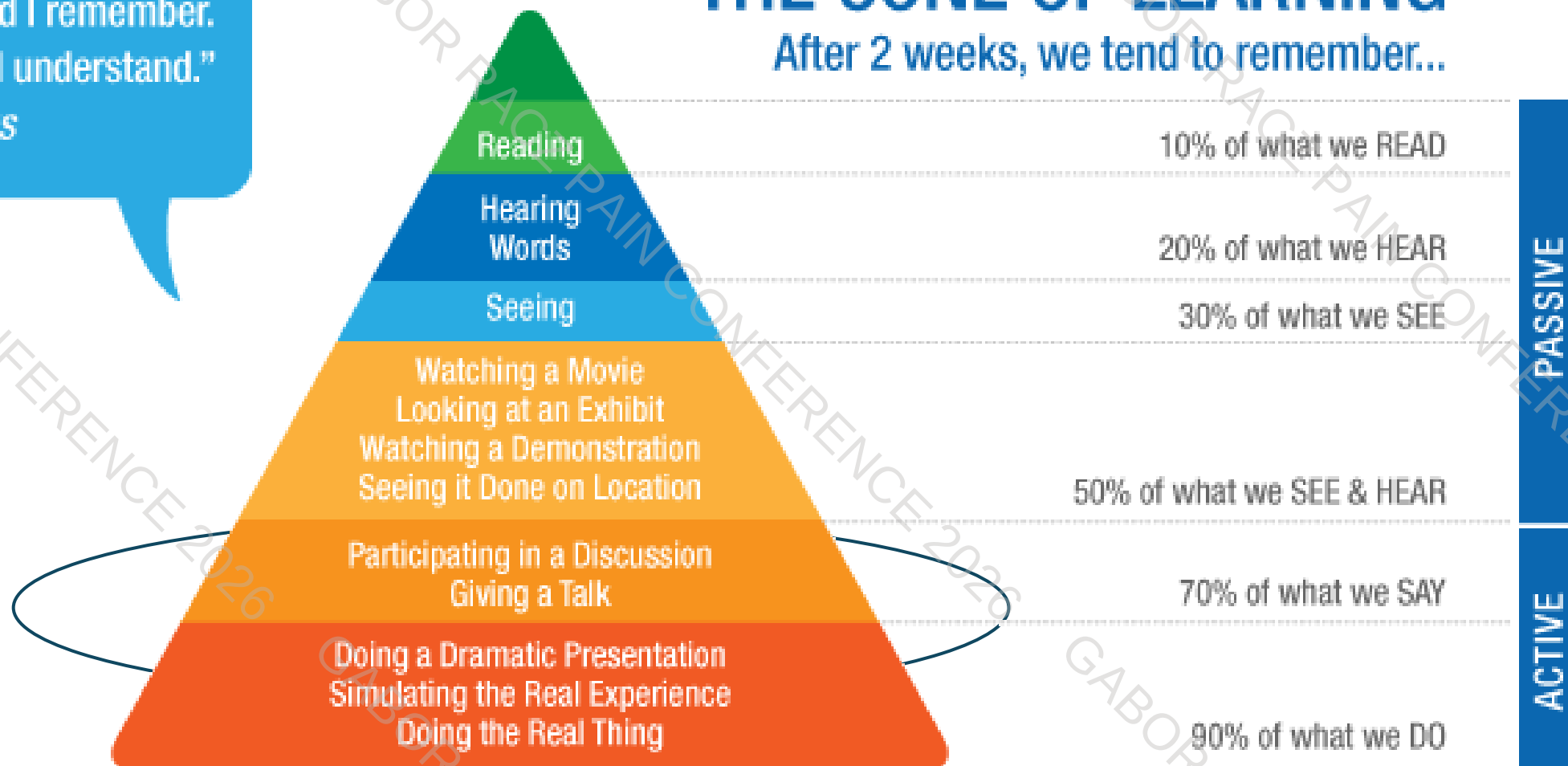
”

Effective learning

"I see and I forget.
I hear and I remember.
I do and I understand."
Confucius

THE CONE OF LEARNING

After 2 weeks, we tend to remember...



Effectiveness of continuing medical education.

[Marinopoulos SS et al, Evid Rep Technol Assess \(Full Rep\). 2007 Jan;\(149\):1-](#)

Source: Edgar Dale (1969)

LEARNING STYLES

VISUAL

- graphs
- flashcards

AUDITORY

- lecture
- music

PHYSICAL

- hands-on
- movement

VERBAL

- writing
- presenting

LOGICAL

- patterns
- statistics

SOCIAL

- collaboration
- teams

SOLITARY

- Independent
- Individual

Curricular Gaps and Barriers




Only
11–20 hours
Median pain teaching
across the entire
medical curriculum


80–96%
lack compulsory
dedicated pain
teaching


42%
lack specific
pain-learning
objectives


16%
are unsure
whether pain is
assessed


Only
8%
of graduate
education studies
measure patient
outcomes

Shipton et al., 2018

Malik et al., 2022



**Fragmented
landscape**



Medicine



Nursing



Physiotherapy



Psychology



**Interprofessional
learning remains rare**

Skidmore et al., 2025

----- Gaps in depth • consistency • delivery -----

Curriculum priorities



1 Standardized curricula
Use established resources
such as EFIC



**2 Practical clinical
placements**



**3 Qualified
educators**



Competency



Simulation + case-based learning



interprofessional training



multidimensional assessment



Learning goals

1. Effective Learning
- 2. Effective Education/ fellowships**
3. Effective examination: Improve FIPP and CIPS

"Education is the most
powerful weapon which
you can use to change
the world."

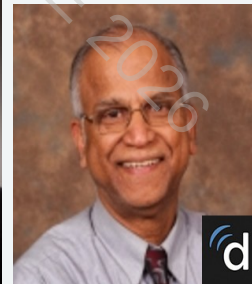
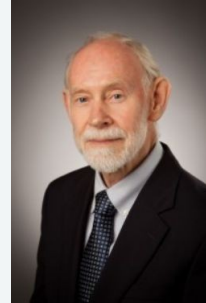
- Nelson Mandela

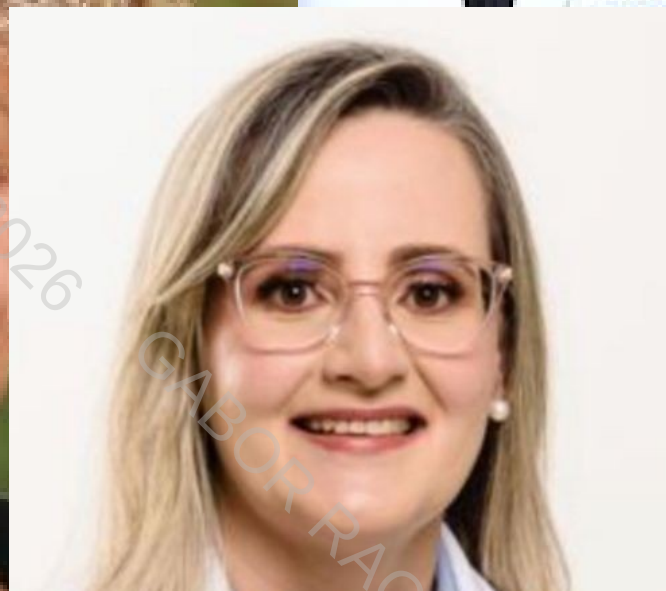




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A special tribute to education







PAIN Practice

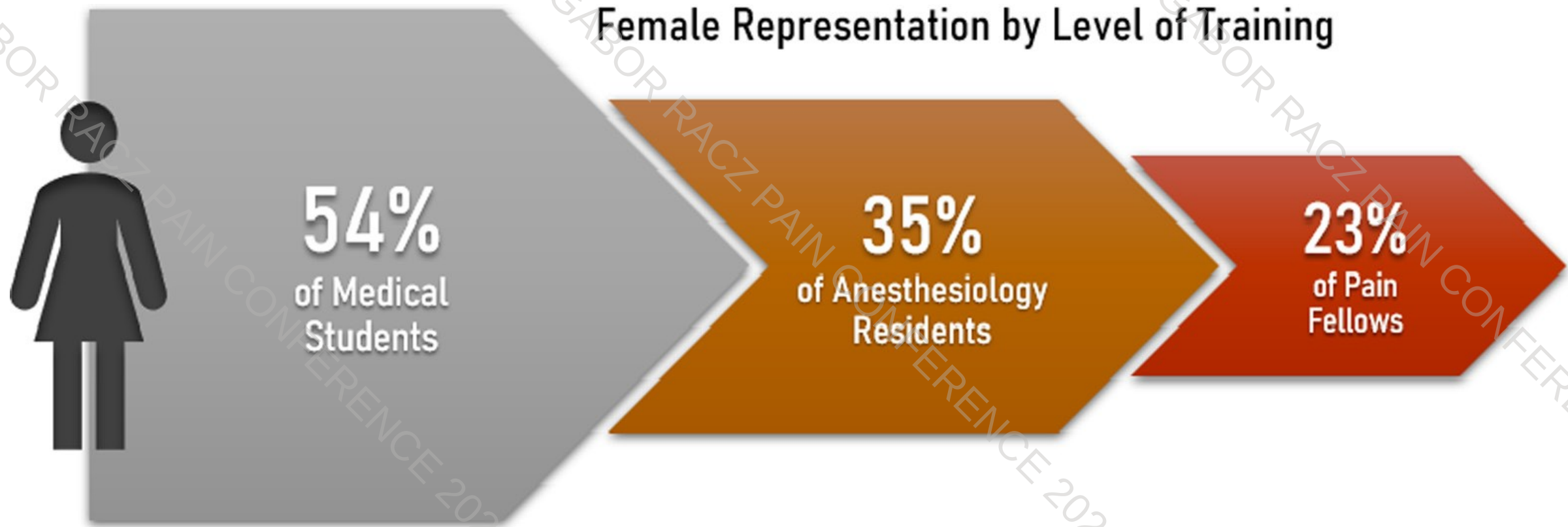
EDITORIAL

Not a match: Why women are not choosing pain medicine

Eliana Ege MD, Lakshmi Koyyalagunta MD, Saba Javed MD 

First published: 03 June 2024 | <https://doi.org/10.1111/papr.13381>

Female Representation by Level of Training



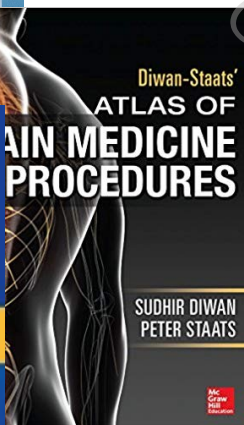
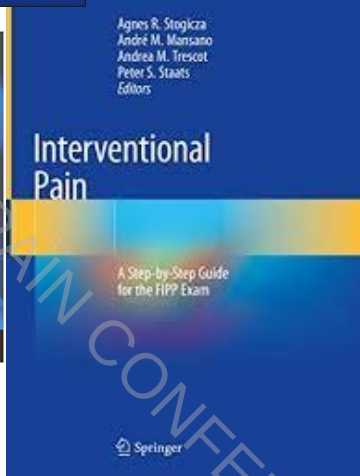
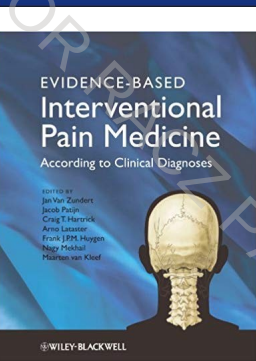
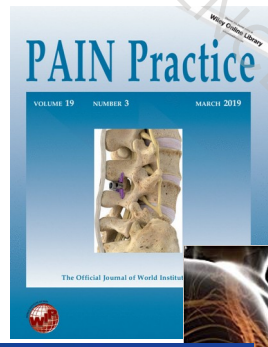
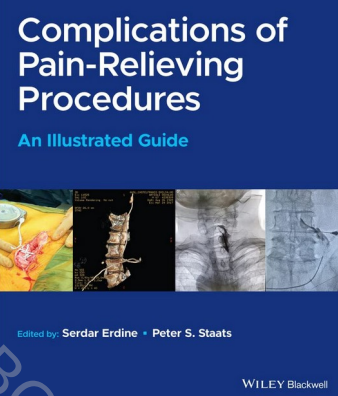
Ege, E., Koyyalagunta, L. and Javed, S. (2024), Not a match: Why women are not choosing pain medicine. Pain Pract. <https://doi.org/10.1111/papr.13381>

Involve Women!

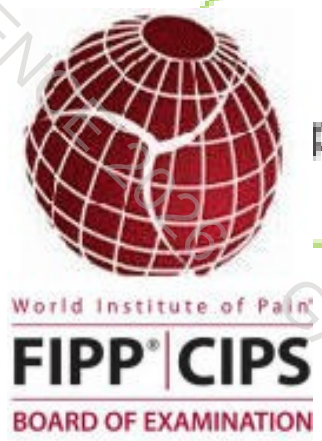


The WIP Mission

WIP provides pain medicine educational resources, specialized hands-on training and workshops, related conferences and seminars, exchange of clinicians, and is an international community of experts in the field. We promote personal and practice growth with the support of a global group that is passionate about patient care. Expand your accolades with the FIPP|CIPS Board of Examination certification.



Improve quality of Pain Medicine



How to evaluate educational programs

REVIEW

Evaluating pain education programs: An integrated approach

Adam Dubrowski PhD^{1,2,3,4}, Marie-Paule Morin MD^{1,5,6}

A Dubrowski, M-P Morin. Evaluating pain education programs:
An integrated approach. Pain Res Manage 2011;16(6):407-410.

L'évaluation des programmes d'enseignement
sur la douleur : une approche intégrée

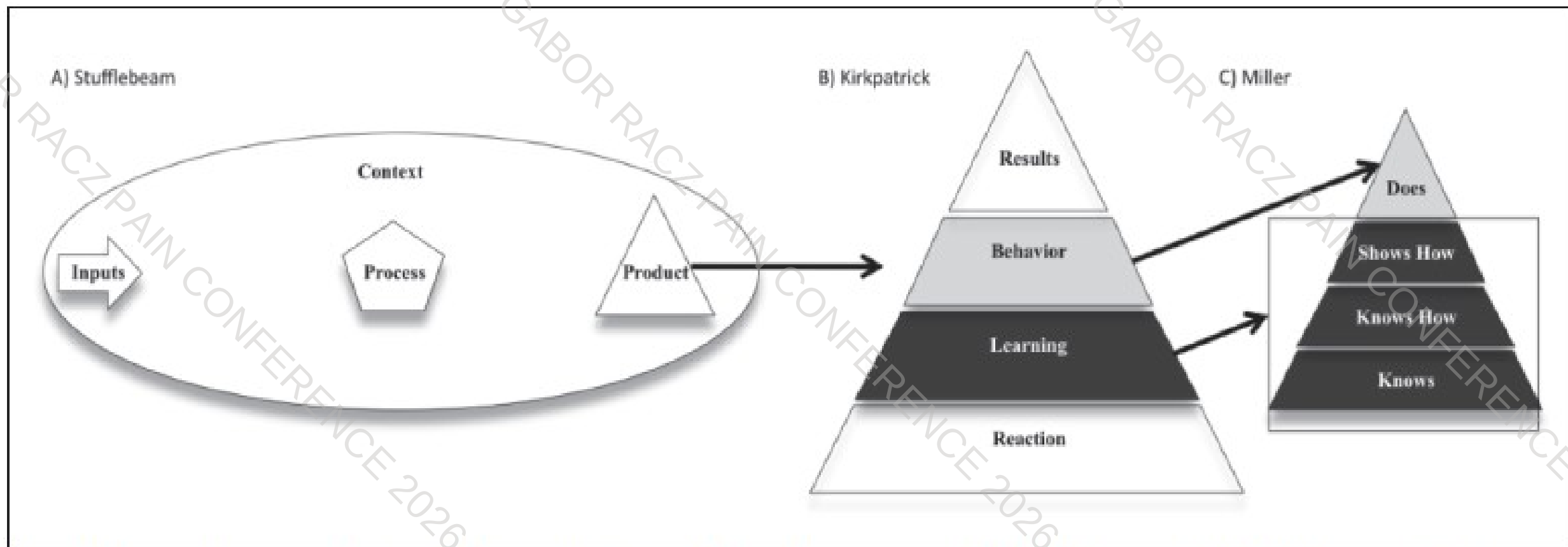
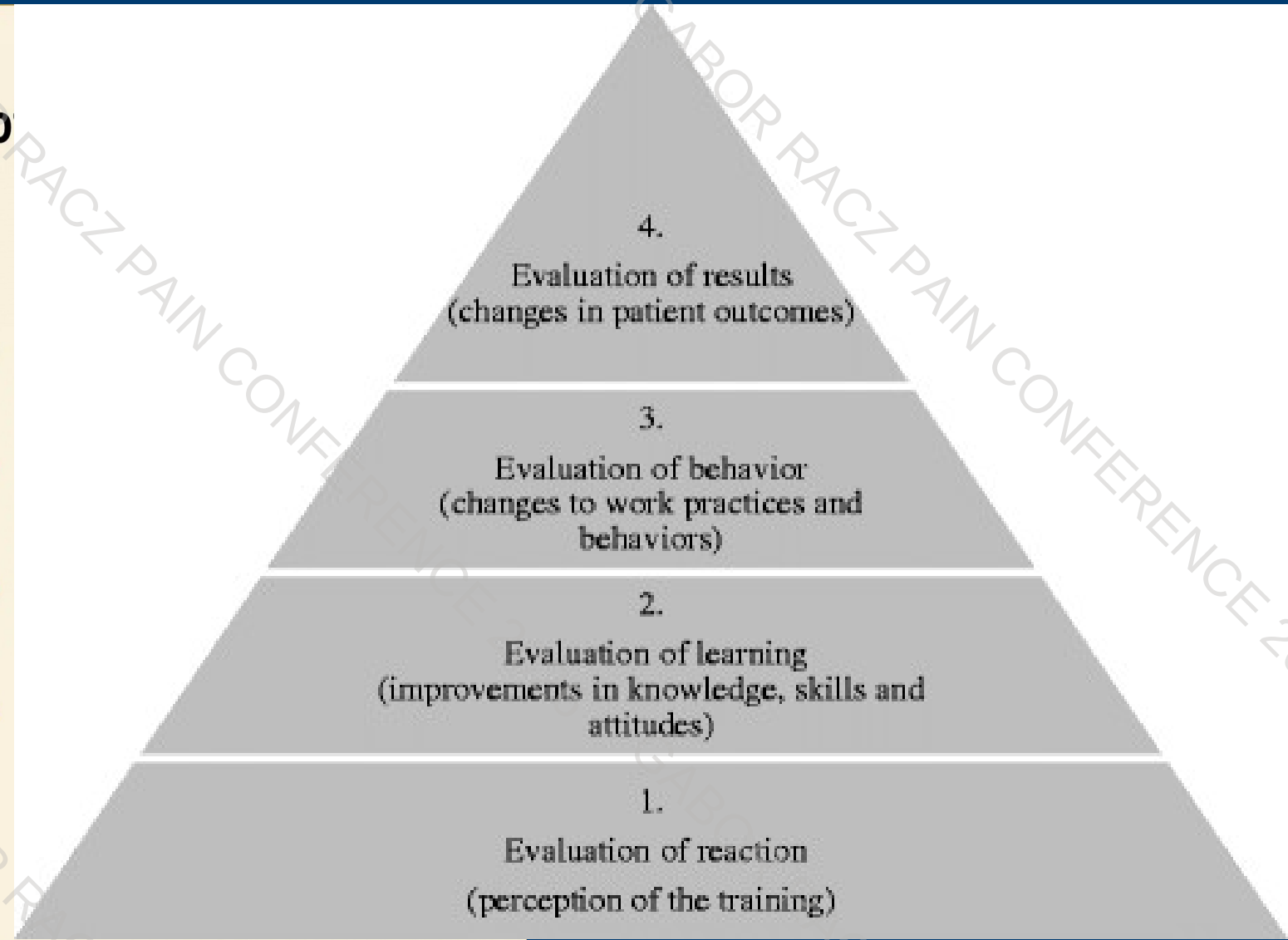
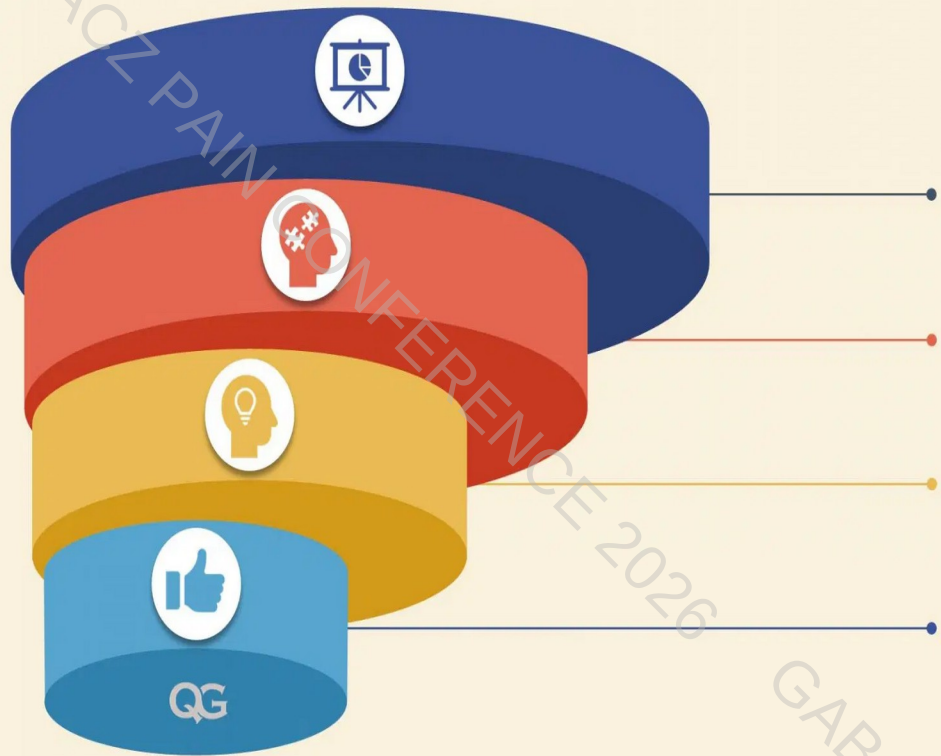
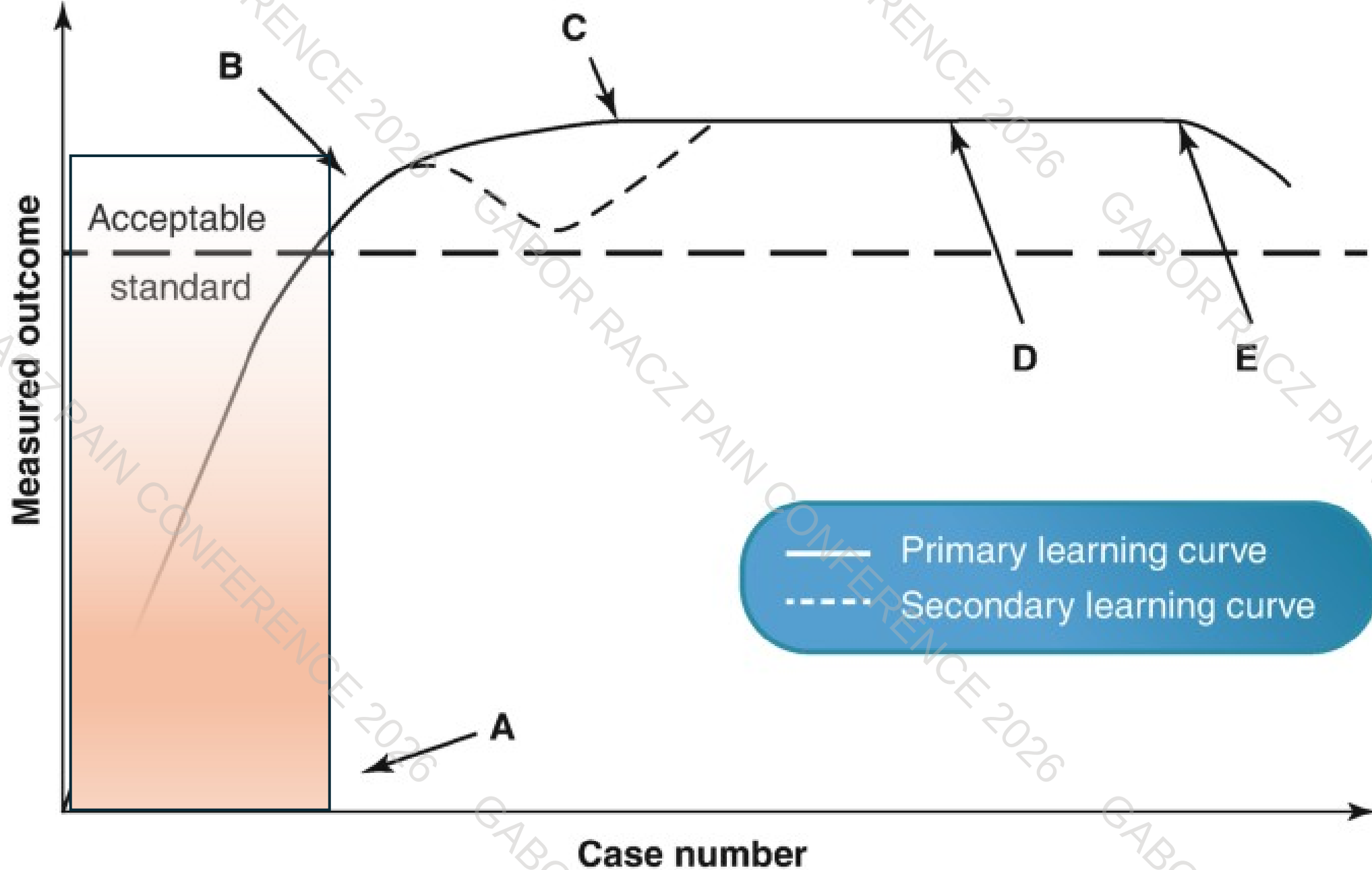


Figure 1) Integrated program evaluation model. Panels A to C are the pictorial representations of (A) Stufflebeam et al's (8) CIPP (context, inputs, processes and products) model, (B) Kirkpatrick's Learning Evaluation Model (5) and (C) Miller's Clinical Assessment Framework (6). The CIPP is a process-based model in which outcomes or products are only part of the program evaluation. Kirkpatrick's model outcomes can help evaluators in reaching decisions about what outcomes to measure and where to measure them. Finally, according to Moore et al (14), Miller's framework can be helpful in deciding on the choice of assessments to address the specific outcomes

THE KIRKPATRICK TRAINING EVALUATION MODEL

The Kirkpatrick Model - Four Levels of





About simulation...





About simulation...



Angélique du Coudray (1712-1794)



La "Machine"
1755



She saved thousands of babies





**“Good judgement comes from
experience, unfortunately, experience
comes from bad judgement”**

Unknown



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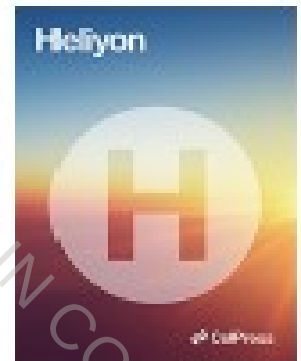
Heliyon 9 (2023) e18249



Contents lists available at [ScienceDirect](#)

Heliyon

journal homepage: www.cell.com/heliyon



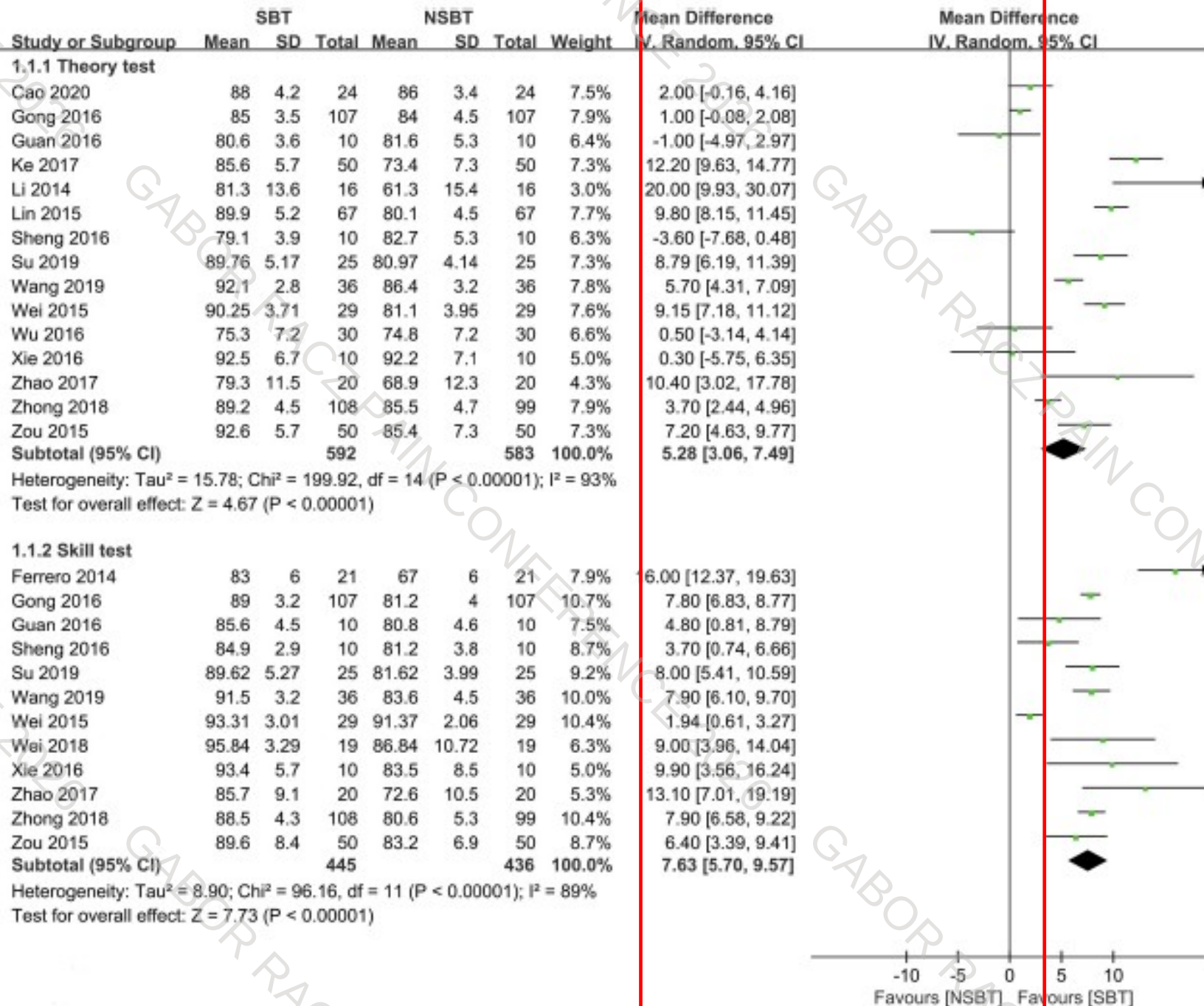
Review article

Simulation based training versus non-simulation based training in anesthesiology: A meta-analysis of randomized controlled trials

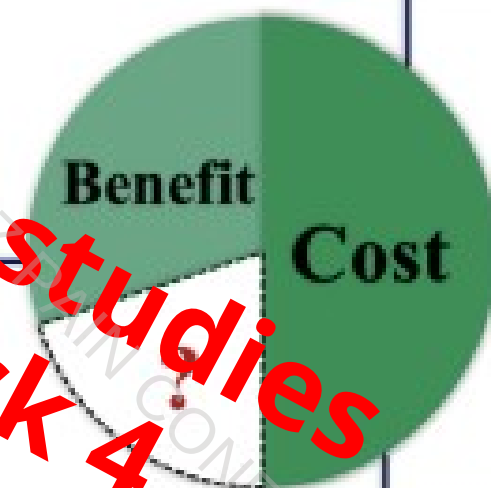
Yi Su, Yi Zeng^{*}

Department of Algology, The People's Hospital of Dujiangyan, No 622 Baolian Road, Dujiangyan, Sichuan, 611830, China

Kirkpatrick 3



Kirkpatrick framework	Evaluation focus	Meta-analysis result	GRADE quality
Reaction	Satisfaction	Favored SBT	Low
	Confidence	Favored SBT	Low
Learning	Skills	Favored SBT	Moderate
	Knowledge	Favored SBT	Moderate
Behavior	Short-term	Favored SBT	Low
	Long-term	?	-
Results	?	?	-
Reaction: how learners perceive the educational intervention Learning: learning of skills and knowledge Behavior: learners' behavioral changes in professional setting Results: the effect of learners' actions			



Investment	Gaps
Feedback	Evidence-based model, sound recording system
Simulation fidelity	High-fidelity and multi-model mannequins
Instructor training	Simulation teaching skills, mastery learning models, training for various devices

Implementation	Gaps
Deliberate practice	Sites, equipment, time for practice
Curriculum integration	Mix with existing learning modalities
Skill maintenance	Mechanism of skill decay and maintenance, follow-up evaluation

Fig. 3. A summary for the benefit and cost of simulation training.

MOST IMPORTANT - PATIENT OUTCOME: EFFECT AND COMPLICATIONS

HOW TO BE A GOOD TEACHER

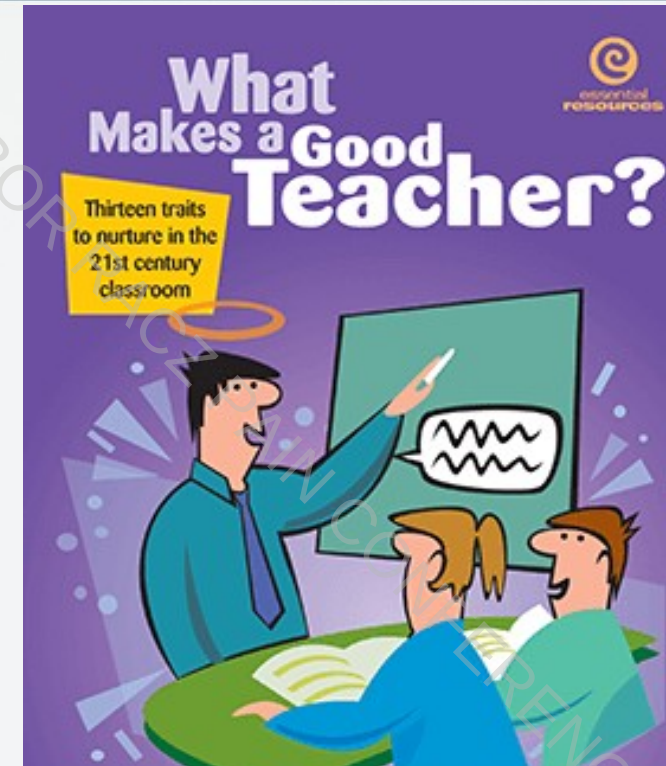
Enhancing Your Skills as a Teacher in the Classroom





Educator– certification?

1. Passionate and professional
2. Structure for growth
3. Optimistic
4. Communicator
5. Empathic listener
6. Facilitator
7. Ethical
8. Well prepared and group of educators must teach the same things
9. Good class room managers



CERTIFICATE OF RECOGNITION



Outstanding Teacher

This certificate is awarded to

Recipient Name

for exceptional skill and performance in the field of Teaching

Date

DATE

Your Signature

YOUR TITLE

Effective Educational Methods

1



Simulation-based curriculum



Fellows



Knowledge gain + transfer to clinical practice



Kirkpatrick levels 1–3



Sarno et al., 2022

2



Simulation + bedside teaching



Medical students



Better practical-exam performance



Simulation-first outperformed ward-first



Kurz et al., 2021

3



E-learning + simulation



Medical students



Greater knowledge + confidence



Better than e-learning alone



Poulsen et al., 2019

4



Hybrid course



Nurses



39.7% knowledge gain



86–89% reported improved clinical skills



Siddiqui et al., 2025



Knowledge



Confidence



Competence



Clinical practice



Educational interventions improve nurses' knowledge and attitudes: **SMD 2.41**

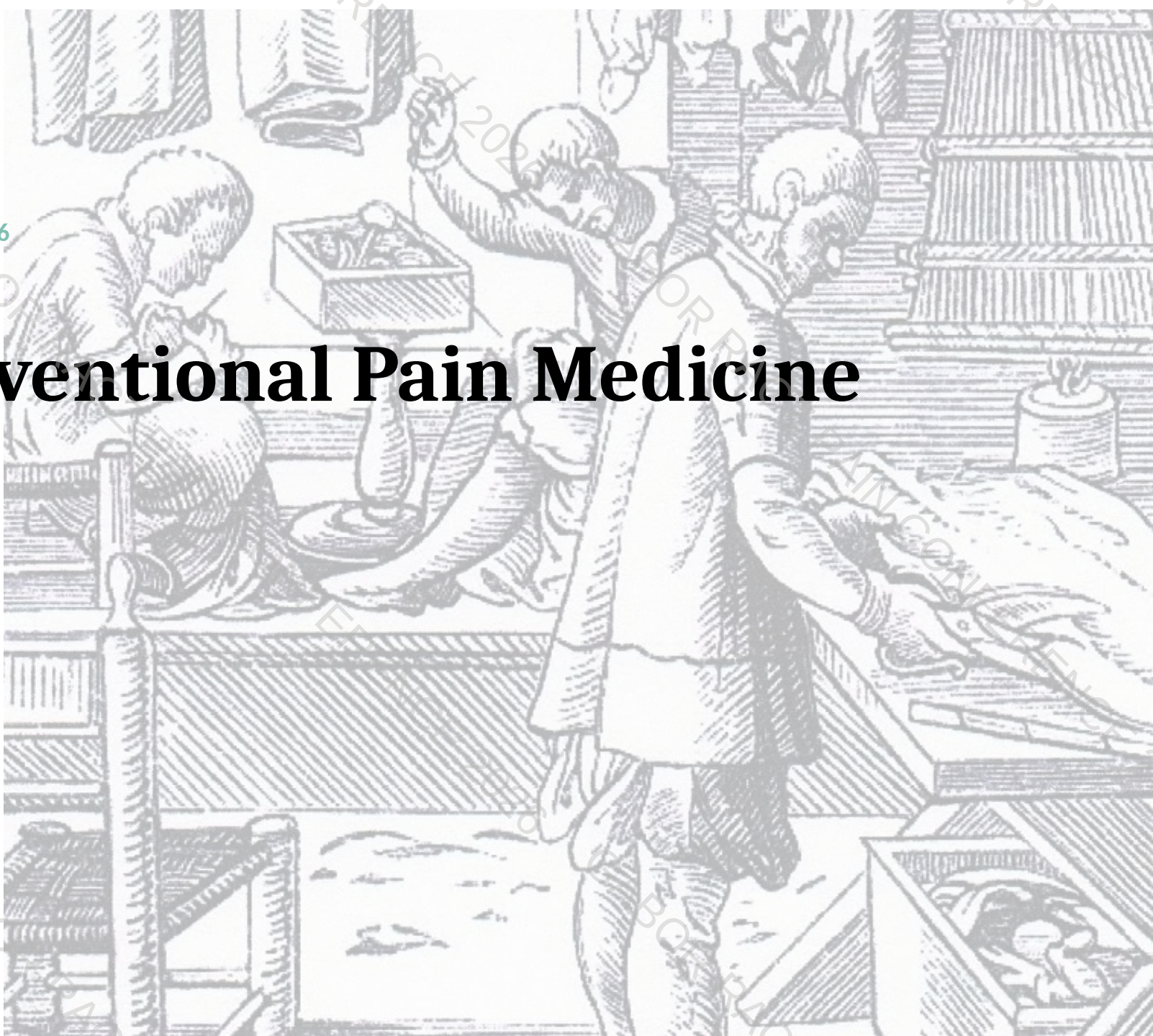
Yuan et al., 2024

EVIDENCE BRIEFING • AUGUST 2026

Fellowships Interventional Pain Medicine

Master-apprentice model of education

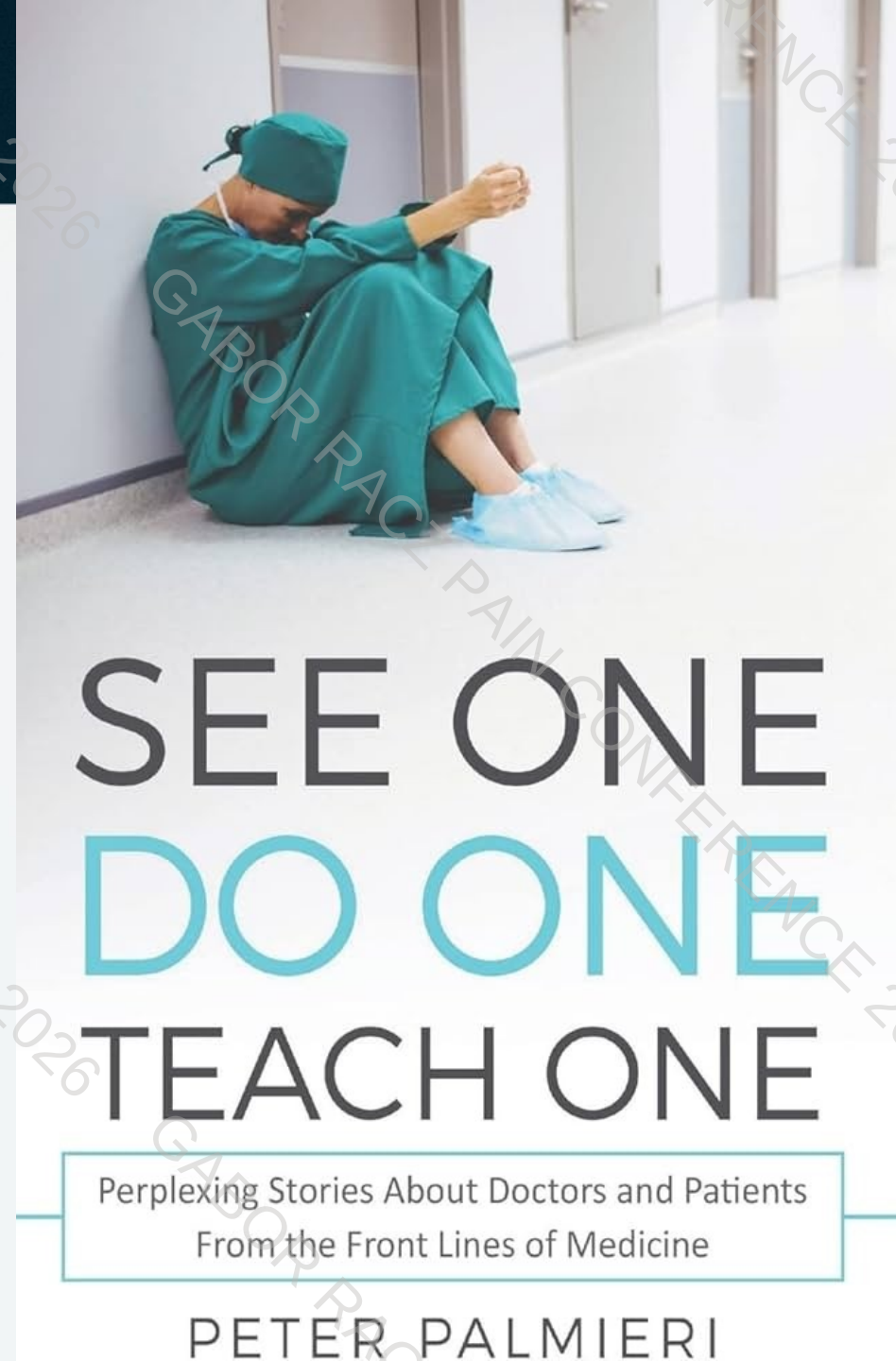
Three questions the title collapses: Is fellowship sufficient? Is it necessary? Is it the right shape?





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See one, do one, teach
one!



SEE ONE
DO ONE
TEACH ONE

Perplexing Stories About Doctors and Patients
From the Front Lines of Medicine

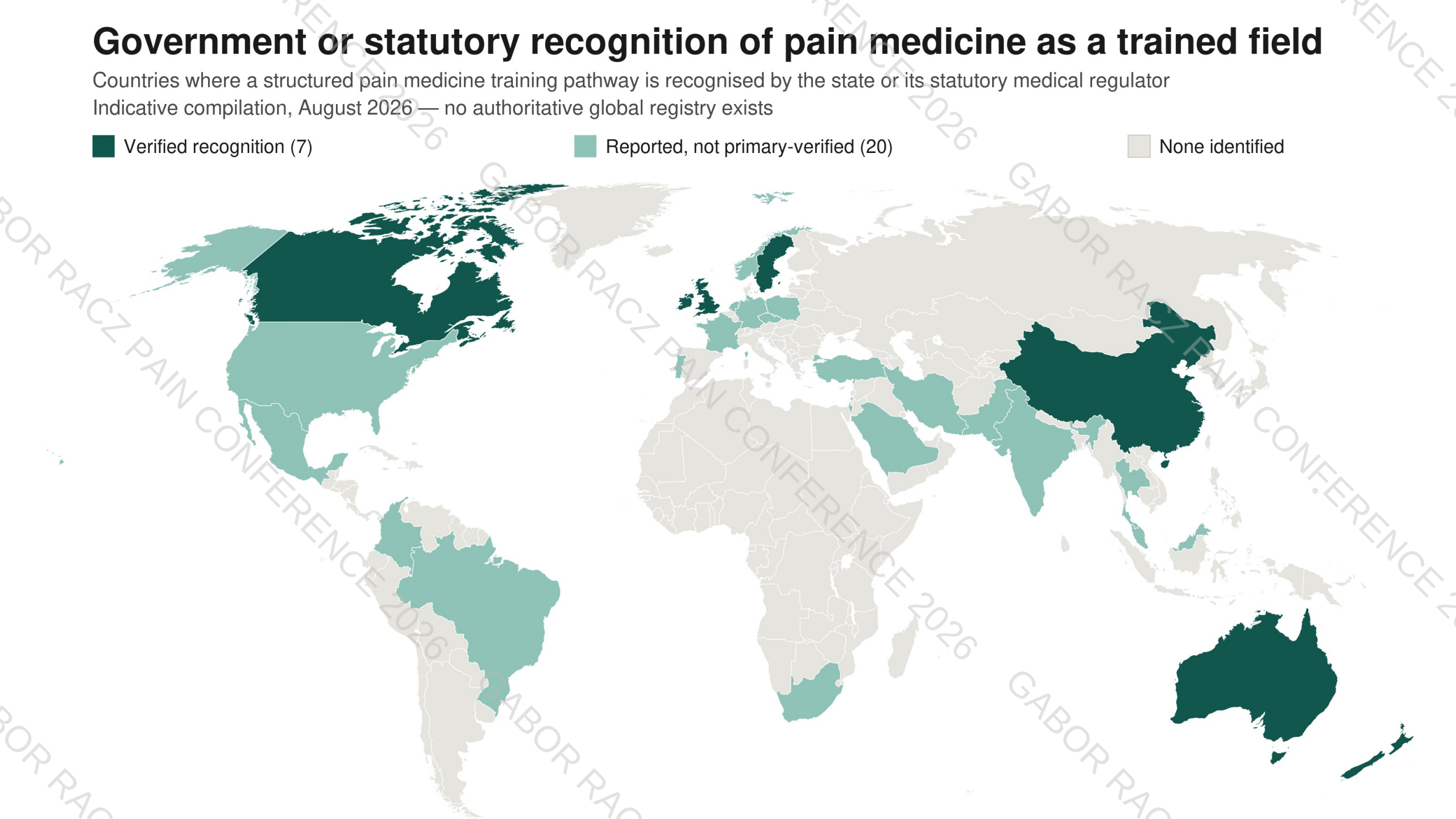
PETER PALMIERI

Government or statutory recognition of pain medicine as a trained field

Countries where a structured pain medicine training pathway is recognised by the state or its statutory medical regulator

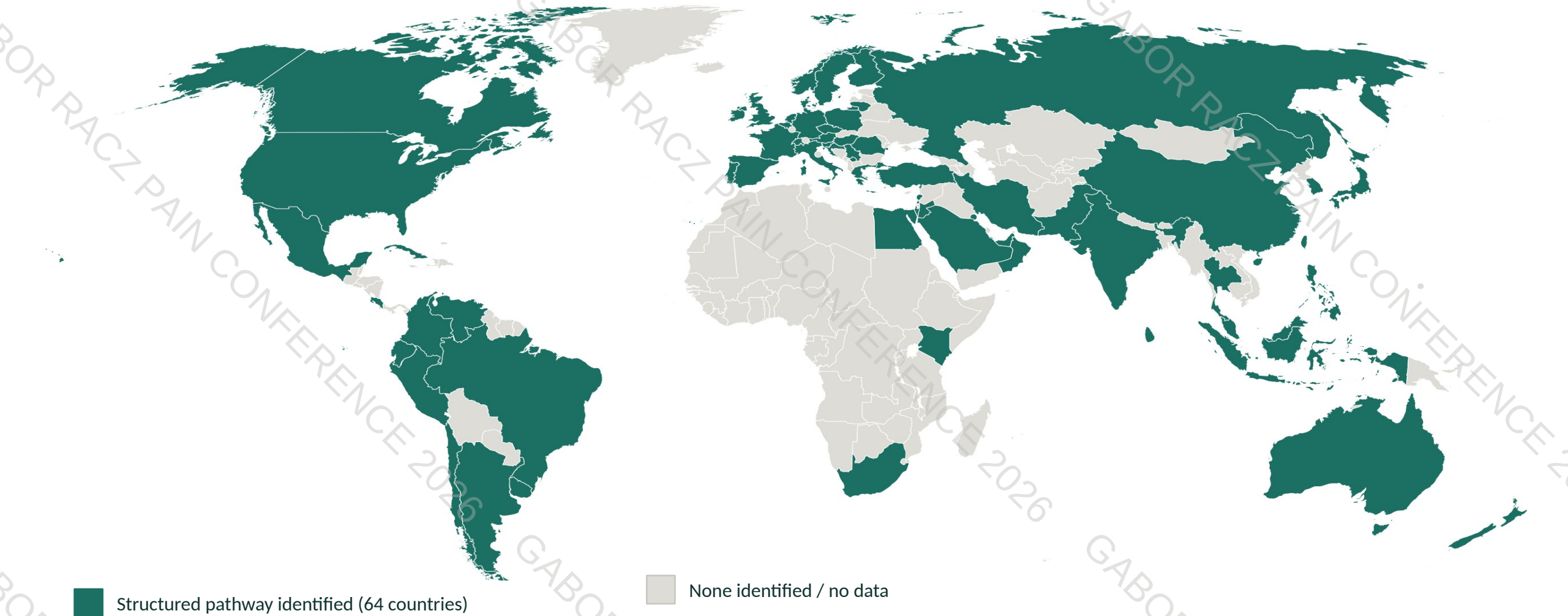
Indicative compilation, August 2026 — no authoritative global registry exists

■ Verified recognition (7)
 ■ Reported, not primary-verified (20)
 ■ None identified



Meanwhile, many countries of the world has no pathway at all

Countries where at least one structured pain fellowship or formal training pathway was identified



Indicative compilation, Aug. 2026 — no authoritative global registry exists. Grey does not prove absence. Verify before citing.

The debate over whether one year is enough is a debate available only to the shaded countries. Sub-Saharan Africa outside South Africa and Kenya, much of Central and Southeast Asia, and most of Central America have no identified pathway.

Traditional fellowships;

Two findings from the same 24-month window, rarely discussed together

7%

of employers say fellowship graduates
are **ready for independent
practice**

National survey of pain physician employers, n = 196 (2024)

17.7%

of accredited fellowship positions
went **unfilled**

NRMP pain medicine match, AY2025 — 320 of 389 positions filled

A quality complaint and a demand collapse at the same time. Any argument that fellowship should be longer has to explain why a programme that already cannot fill its posts should ask for another year.

THE TRAINING GAP

HIGH-RISK SPINAL PROCEDURES DEMAND MORE THAN A SHORT COURSE.

Competent performance requires four essential domains.

COMPETENT SPINAL PROCEDURE PERFORMANCE REQUIRES FOUR DOMAINS

The Academic requires one

Some programs add two-week su

THE FELLOWSHIP MATCH DATA SHOW THE PROBLEM IS BECOMING MORE ACUTE

NRMP Data: Pain Medicine Fellowship Applications
by Residency Background



PM&R applicants are now the largest single specialty group.

The fellowship is becoming more mixed in baseline preparation at the same time the procedures its graduates perform are expanding in complexity.

PATIENT SAFETY REQUI

PATIENT SAFETY REQUIRES MORE THAN GOOD INTENTIONS. THE STANDARD SHOULD BE COMPETENCY, NOT CREDENTIAL.



Traditional One-Year [ACGME]-Accredited Fellowships

face growing pressure because they struggle to fit rapid advances in minimally invasive procedures and complex chronic care into a 12-month model.

THE CASE FOR REFORMING TRADITIONAL FELLOWSHIPS



1. TIME CONSTRAINTS

A single year forces programs to choose between deep clinical grounding and high-volume procedural training.



2. ADVANCED TECH GAP

Trainees often graduate with minimal exposure to complex devices like spinal cord stimulators or interventional spine implants, relying instead on post-graduate industry workshops.



3. MULTIDISCIPLINARY SHIFT

The applicant pool now includes diverse residencies (like PM&R, neurology, and emergency medicine), meaning trainees arrive with vastly different baseline skills.

WHY "TRADITIONAL" TRAINING STILL MATTERS



1. COMPLEX DECISION-MAKING

Safe intervention requires rigorous clinical reasoning, patient selection, and diagnostic accuracy that short weekend courses cannot replicate.



2. STANDARDIZED SAFETY

Formal programs ensure structured supervision in radiation safety, fluoroscopy, and complication management.

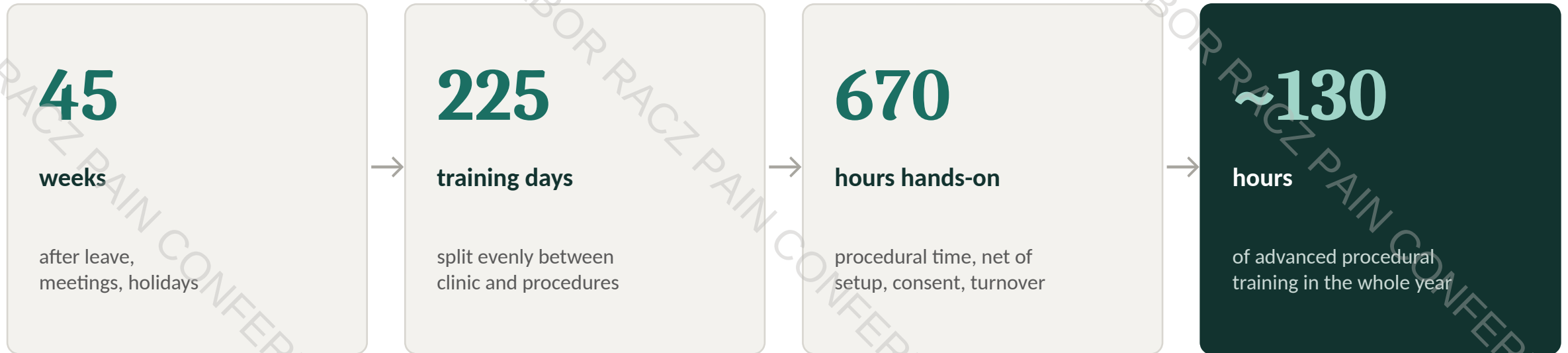


3. HOLISTIC CARE

Beyond procedures, fellowships teach essential opioid stewardship, behavioral health integration, and longitudinal patient management.

The arithmetic behind the complaint

One accredited fellowship year, decomposed



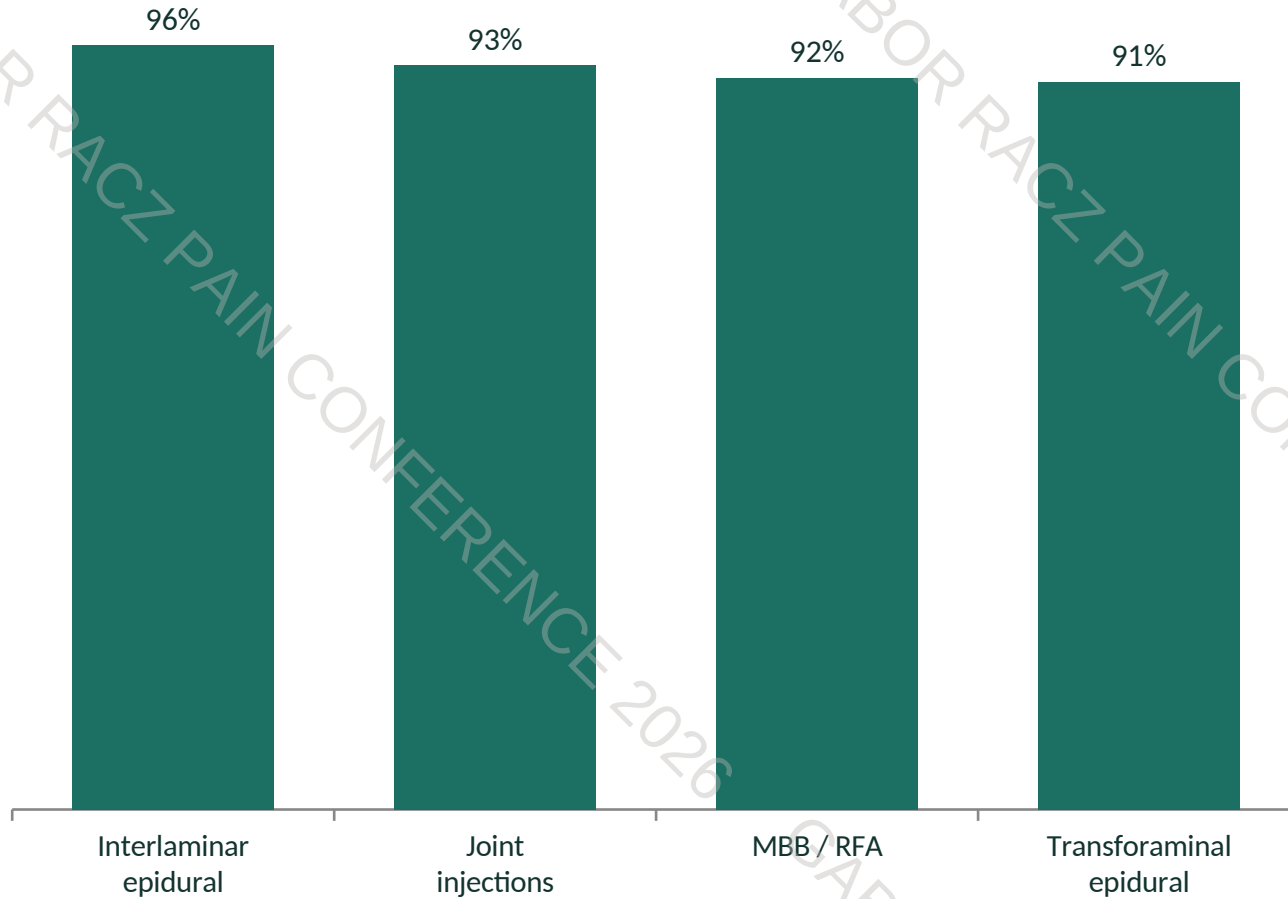
“The current fellowship structure can provide only introductory exposure, with the expectation that fellows will develop into competent pain physicians post-fellowship.”

Pritzlaff, Day, Wahezi & Schatman, on behalf of ~90 co-signatory Pain Medicine Luminaries — J Pain Res 2024;17:687

Figures as published; assumes advanced procedures = 20% of procedural volume

What employers actually report

Graduates are rated competent at basic intervention — the gap lies elsewhere



Where the gap sits

- Advanced procedures — 73% rate SCS trials important; implantables and percutaneous spine procedures rated under-taught
- Billing, coding and practice management
- Psychological and behavioural aspects of pain treatment

85%

would not consider a candidate who was not procedurally trained during fellowship, while 79% say the practice, or industry, must provide further training after hire.

Three systems already train the next generation

Whatever accredited fellowship does not teach is being taught elsewhere

1

Non-accredited fellowships

Embedded in private practices. Apprenticeship-style, procedurally intensive. No external oversight of didactics, multidisciplinary rotations or breadth. Graduates face board-eligibility, credentialing and insurance-panel barriers.

2

Industry & society courses

Cadaver workshops, proctoring, device-specific training. Every programme director permits them; 59% actively encourage them. 54% say fellowship needs extending specifically to avoid depending on them.

3

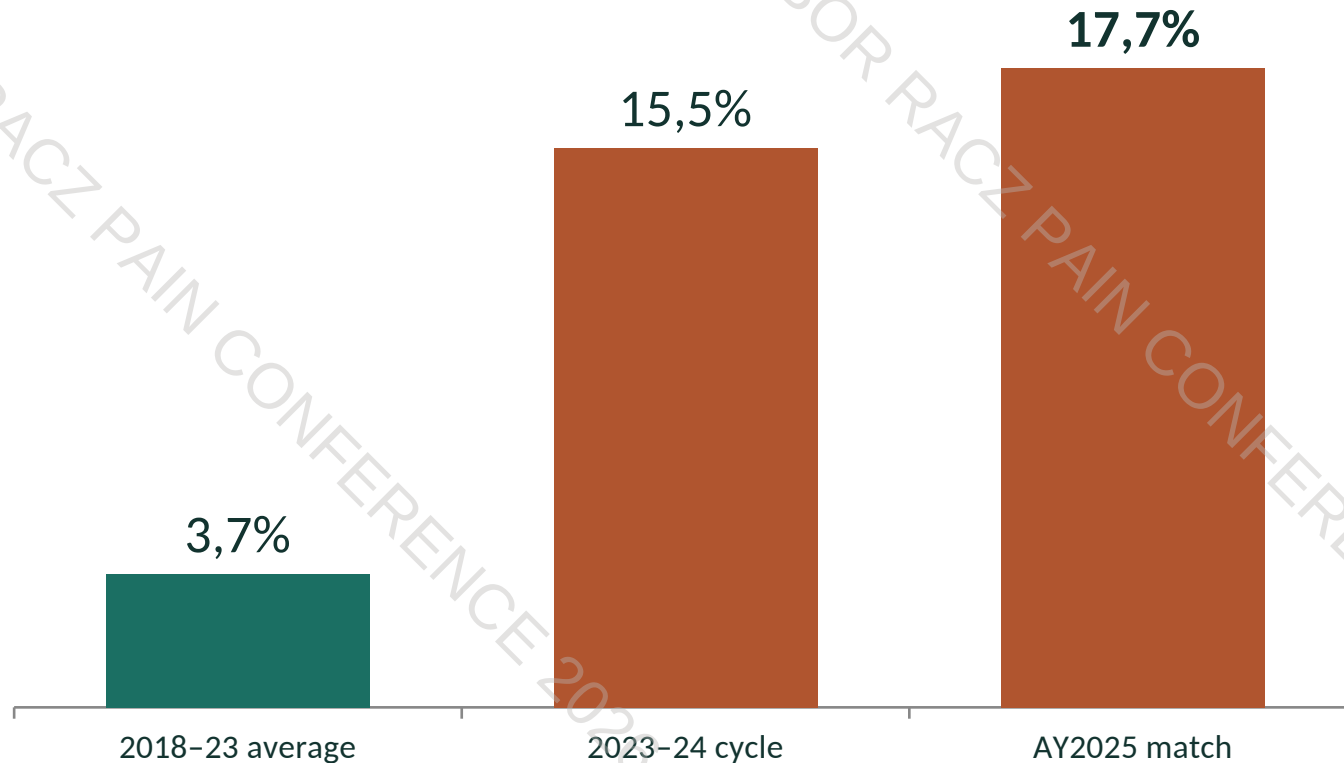
Post-hire employer training

79% of employers say the practice, or industry, must complete the training after graduation. More than 70% of fellows report receiving more business education from industry than from their fellowship.

The training is happening either way. The live question is how much of it sits under independent oversight.

The market is answering independently of educators

Accredited fellowship positions left unfilled, by cycle



67.6%

of active programmes
filled completely in
the AY2025 match

Declining anaesthesiology applications, rising PM&R, neurology, psychiatry and EM entrants, a more heterogeneous cohort entering a fixed-length year.

The question underneath the question

Traditional fellowships must change and become more attractive

What would actually resolve this

- Validated competency thresholds and EPAs, making training length an output, not an input
- Registry graduate case volume to complication and revision rates
- Track-based models tested, with independent accreditation (**NOT industry based!**)



Learning goals

1. Effective Learning
2. Effective Education and safe
- 3. Effective examination: Improve FIPP and CIPS**



Cleveland Clinic
Crile Building

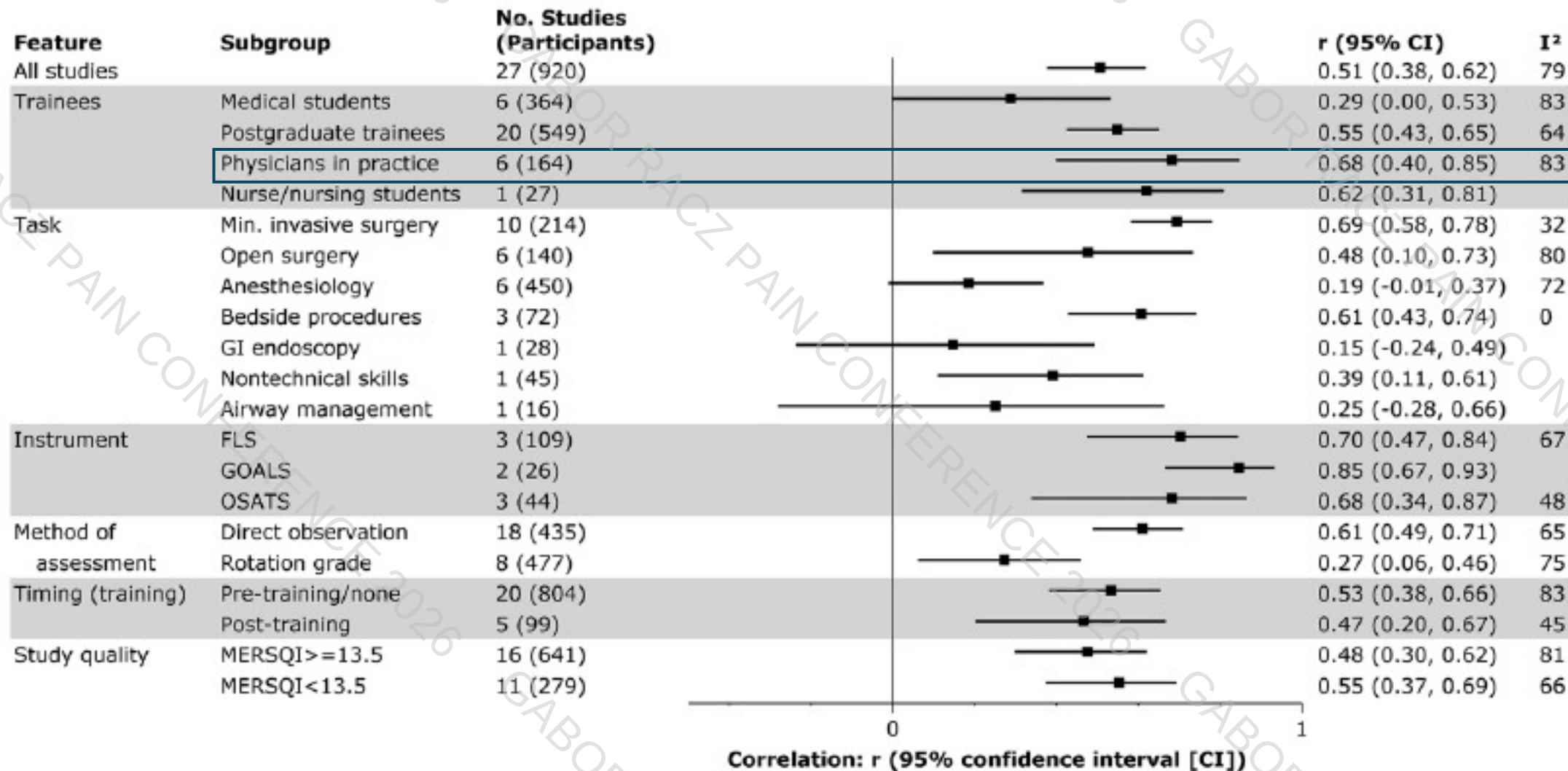
Patient Drop-Off →

FIPP en CIPS

- FIPP started 2000
- CIPS first started in 2015
- Many other exam-locations started
- New exam-vignettes, other training and new questions
- Exams can be done in English, Spanish and in Portugese



Simulation-based educational assessments





FIPP & CIPS Alumni

1,680 FIPPs certified since 2001, from 69 countries

472 CIPSs certified since 2015, from 52 countries



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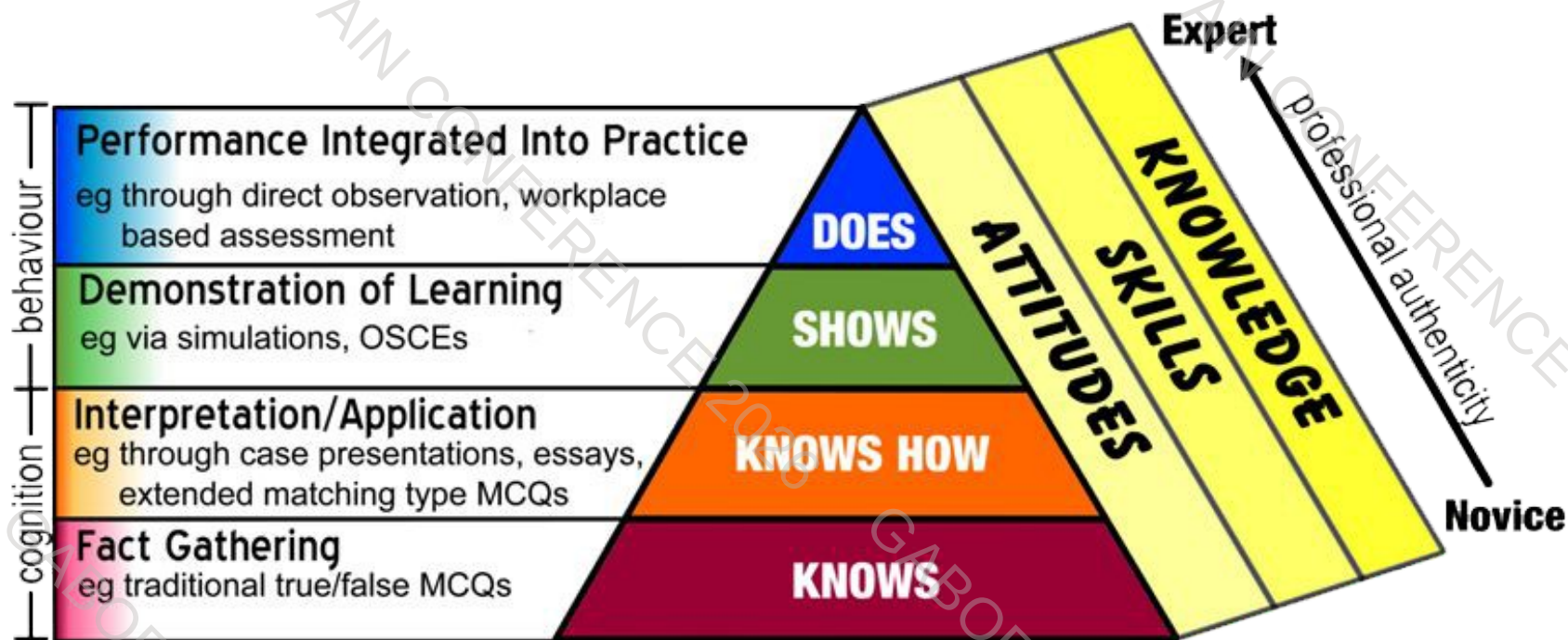


- FIPP Pass Rate 2009-2023: 78.3% $\pm$ 0.1%
- **FIPP Pass Rate 2022-2025: 85.3% $\pm$ 0.1%**
- CIPS Pass Rate 2015-2023: 75.6% $\pm$ 0.1%
- **CIPS Pass Rate 2019-2024: 78.4% $\pm$ 0.1%**

What tests the exam FIPP&CIPS

MILLER'S PRISM OF CLINICAL COMPETENCE (aka Miller's Pyramid)

it is only in the "does" triangle that the doctor truly performs



Kirkpatrick 3

The Meaning of FIPP® & CIPS (i.e., Validity Argument)

WIP is making a claim:

- WIP affirms that Dr. < X > has demonstrated mastery of the discipline of interventional pain medicine, and we recognize and accept < him/her > as a rightful member of our fellowship of interventional pain practitioners.

WIP is confident in making this claim based on evidence of < his/her >:

- breadth of relevant clinical and scientific knowledge;
- depth of knowledge and clinical judgment/clinical decision-making; AND
- technical proficiency in the performance of essential interventional procedures.

FIPP/CIPS Design

<u>Breadth of Knowledge - Theoretical Component</u>	100 MCQs
<u>Clinical Judgment - Oral Component</u>	1-2 Clinical Vignettes (2 Expert Examiners)
<u>Technical Proficiency - Practical Component</u>	4 Simulated Procedures (2 Expert Examiners)

Overall Assessment - Weighted Composite Score:

$$score_{wc} = .2z_{theo} + .2z_{oral} + .6z_{prac}$$

Estimated Composite Reliability

Table 5: Overall Reliability Component Data			
Name	Theoretical	Oral	Practical
Table 5: Overall Reliability Component Data			
Name	Theoretical	Oral	Practical
r_{est} (E_{test})	.742	.640	.708

Overall Estimated Composite Reliability: **$r = .877$**

Exam	r	N /year
GRE	.870-.950¹	340k²
IELTS	.900³	~3.5M⁴
TOEFL	.950⁵	~1.5M

¹ETS, G. (2023). *Reliability and Standard Error of Measurement*. Educational Testing Service. <https://www.ets.org/content/dam/ets-org/pdfs/gre/gre-reliability-standard-error-measurement.pdf>

²<https://blog.achievable.me/gre-exam/key-gre-statistics-from-the-2022-ets-gre-snapshot-report/>

³<https://ielts.org/researchers/our-research/test-statistics>

⁴<https://takeielts.britishcouncil.org/about/press/ielts-grows-three-half-million-year>

⁵ETS, & TOEFL. (2020). *TOEFL® Research Insight Series, Volume 3: Reliability and Comparability of TOEFL iBT® Scores*. ETS.

Questionnaire FIPP

**901 survey invitations sent,
335 responses were received
(37.2%).**

(37.2%).

Importance of exam	<u>Unimportant</u> 6.7%(22)	<u>Somewhat important</u> 20.1%(66)	<u>Important</u> 26.5%(87)	<u>Very important</u> 46.6%(153)
Applies to practice	<u>Not at all</u> 0.6%(2)	<u>To some extent</u> 24.5%(81)	<u>To a significant or great extent</u> 74.8%(247)	
Exam component is valid		<u>Yes</u>	<u>No</u>	<u>Uncertain</u>
Written		90.3%(297)	2.4%(8)	7.3%(24)
Oral		94.2%(308)	1.5%(5)	4.3%(14)
Practical		96.6%(313)	0.9%(3)	2.5%(8)
Would recommend exam		<u>Yes</u> 94.8%(312)	<u>No</u> 5.2%(17)	



Time to improve Two registrars

FIPP



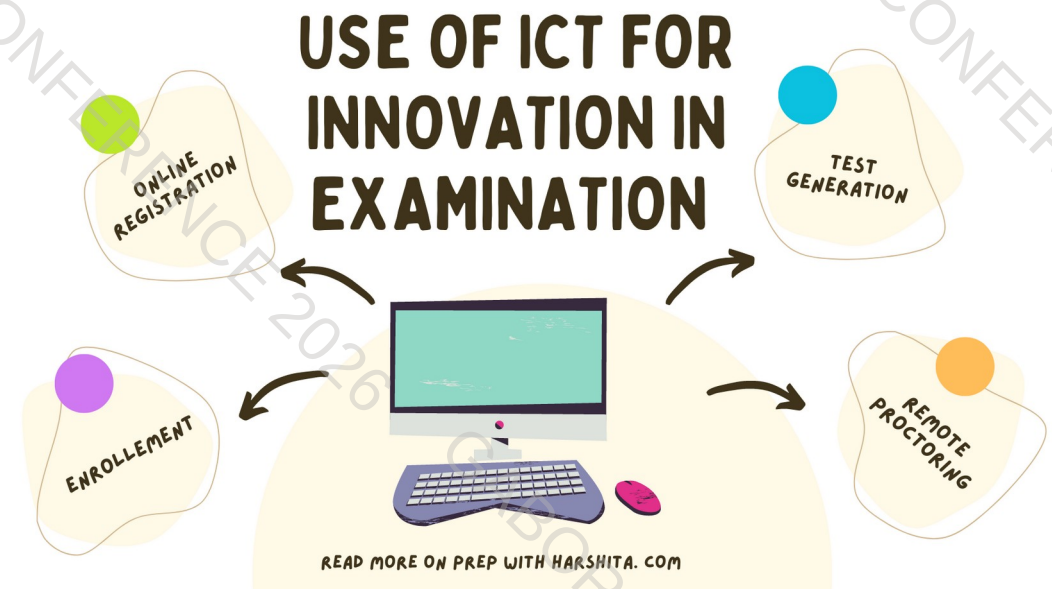
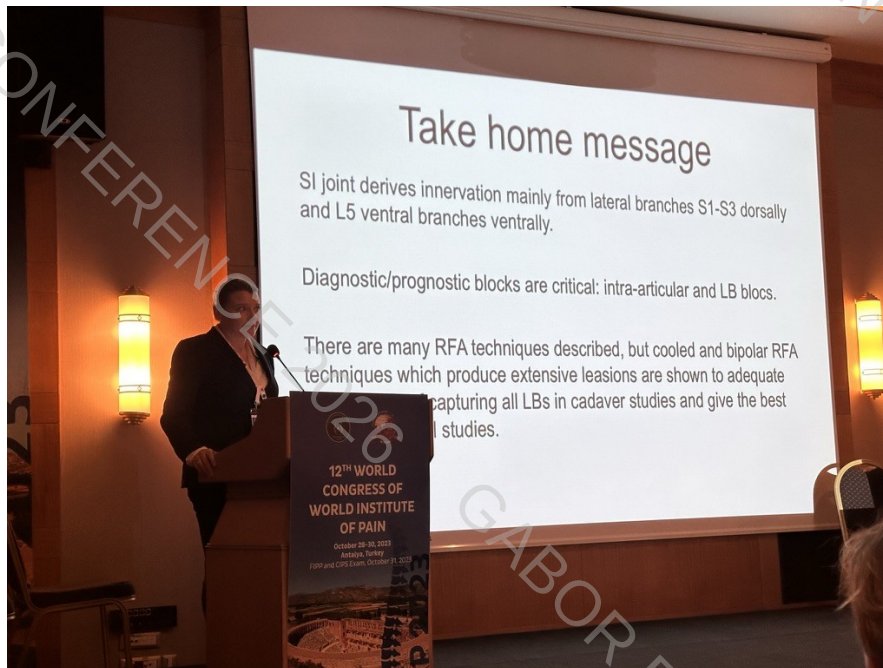
CIPS



What do we want to change in the exams of FIPP and CIPS?

Theoretical: new system for making questions

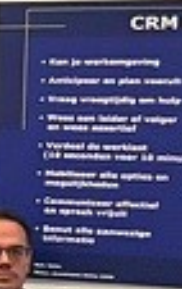
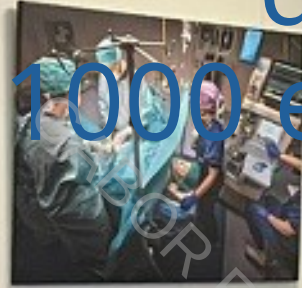
Online before the exam for FIPP and CIPS



**Exam will be divided also in time in
theoretical/oral/practical**



We need a working-group for making exam-
questions
>1000 exam questions



Oral online FIPP



We need a working-group for making vignets for FIPP and CIPS



Examiner-training – examiners school



Examiner certification



The future



- Adding Augmented Reality
- Team training
- Patient training
- Kirckpatrick level 4 training and examining

“Educating the mind
without educating the
heart is no education at
all.”

Aristotle



Education and examination

- 1. Traditional fellowships must change** and more open for other disciplinary perspectives (not only anesthesiology)
- 2. Effective education and examination** in simulation improves patient outcome (Kirckpatrick 4)
- 3. FIPP and CIPS are valid exams** but improvements are needed (Kirckpatrick 3)



The Steve Jobs Edition:

“

***Embrace every failure.
Own it, learn from it, and
take full responsibility for
making sure that next
time, things will turn out
differently.***

”

Keep learning!

