Chiropractic Education: Substance and Quality

Bart Green, DC, MSEd, PhD
Lindsay Gorrell, M(Chiro), PhD
Christopher Petrie, DC
Danica Brousseau, MSc, DC
Philip Dewhurst, Mchiro, EdD, MSc

Disclosures

- The opinions are ours, not those of the WFC, nor any of our employers or business associates

- We have no conflicts of interest relevant to this presentation

Introduction

- Substance = More than a list of courses
- Quality = More than grade distributions and student happiness indices
- What makes education substantial and trustworthy?

Session Objectives

Characteristics of chiropractic training worldwide

Data from international chiropractic programs and accrediting documents

Indicators of substance and quality in chiropractic education

Perspectives from: Switzerland, United States, Canada, England

Application to conference theme

With what we have learned, how can we improve lifelong learning in chiropractic?

Chiropractic Training Worldwide

Bart Green

Chiropractic Training Worldwide Accreditation

RESEARCH BMC Medical Education 2025 Open Access

Program standards and student competencies among global chiropractic accreditation agencies: a content analysis

Claire D. Johnson	Bart N. Green	Lyndon Amorin-Woods	David Byfield
Waleska Crespo-Rivera	Philip Dewhurst	Chantale Doucet	Andy Dunn
Marina Fox	Amanda Jones-Harris	Carolina Kolberg	Charmaine M. Korporaal
Craig Little	Daniel Moore	John Mrozek	Gary Schultz
Gregory Snow	Stephney Whillier	David Wickes	Yi Kai Wong
Christopher Yelverton	Igor Himelfarb		

Investigated similarities and differences in student competencies and program standards among four chiropractic accreditation agencies worldwide

Methods

- Modified Delphi technique
- Student competencies and program standards extracted from CCEA, CCEC, CCE-USA, ECCE
- 21 experts coded every item into standardized categories (twice)
- 3 rounds of consensus process
- ANOVA to analyze for significant differences in student competencies and program standards
- See paper for details

No statistically significant differences in chiropractic competencies and program standards across agencies

All contained proportionally similar content

Globally, our accreditation might be more similar than we think!

Chiropractic Training Worldwide Program Requirements

Program Analysis

What do we know about chiropractic education and training?

13th WFC Global Education Conference

October 14-17, 2026

Utrecht, The Netherlands

Chiropractic training requirements, degrees, and accreditation worldwide: A cross-sectional analysis

- Purpose: Describe the key characteristics of chiropractic degree-granting programs worldwide

Methods

- Currently ongoing
- Survey
- Authors from 12 countries: Australia, Belgium, Brazil, Canada, Denmark, Malaysia, Philippines, Puerto Rico, South Africa, Spain, United Kingdom, and United States – we will be adding more authors.
- Ethics approval from National University of Health Sciences
- OSF Date registered Dec 31, 2022 https://osf.io/hgws2

Update: What are the data showing?

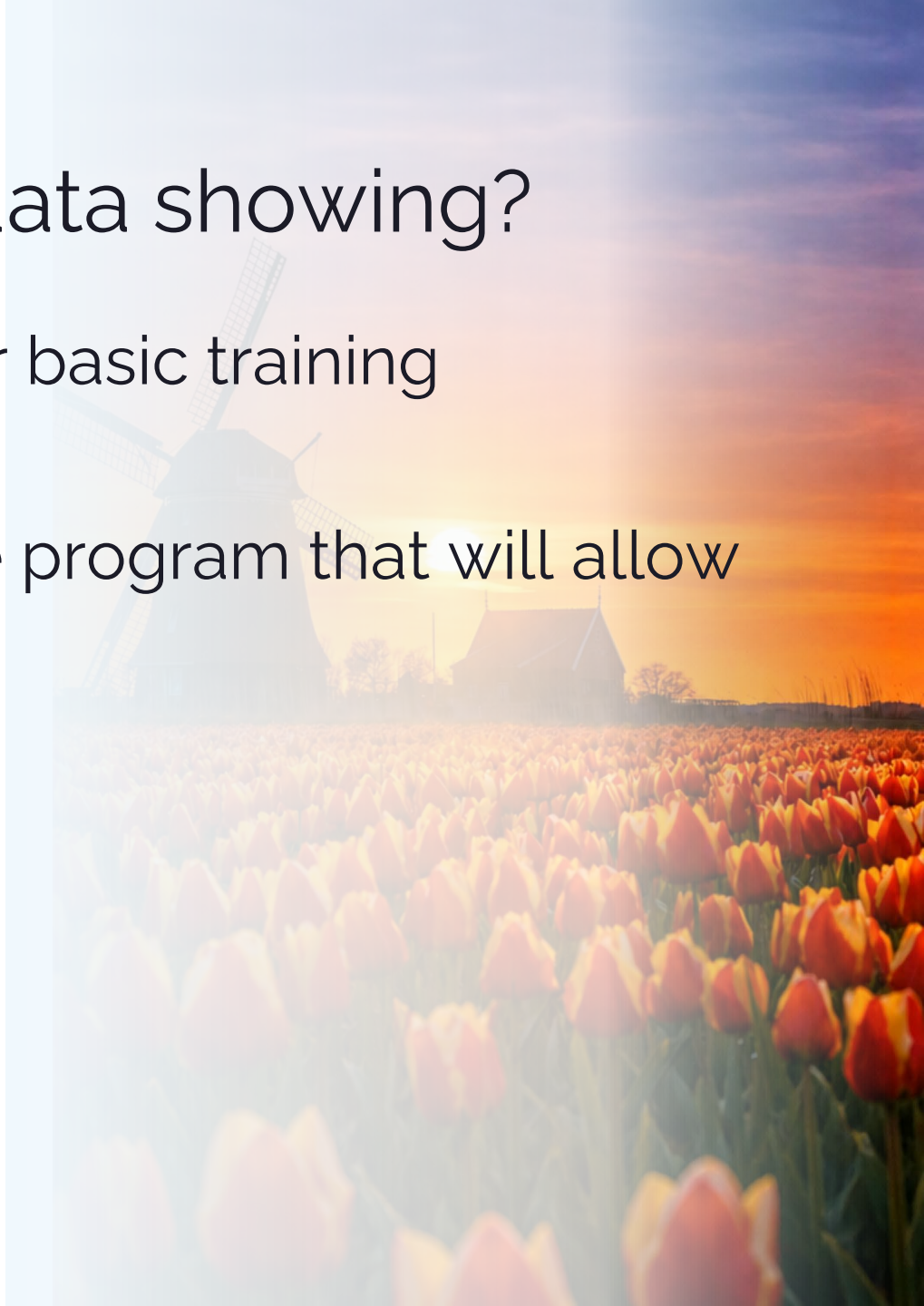
- At present, **71 chiropractic programs**, including institutions that provide more than one type of degree/credential (eg, bachelor, master)
- More programs are developing

Length of time: What are the data showing?

Program length of time to complete for basic training

- Typical range of time to complete the program that will allow recognition for clinical practice

- Range: **4 to 6 years**



Accreditation: What are the data showing?

Range of accreditation – depending on the region

- **Council on Chiropractic Education (CCE-US)**
- **Council on Chiropractic Education Australasia (CCEA)**
- **European Council on Chiropractic Education (ECCE)**
- **Council on Chiropractic Education Canada (CCEC)**
- **General Chiropractic Council (GCC, UK)**
- **New program, with accreditation application in process**

- Degree accredited by a university, which is expected for the region
- No CCEI-recognized specialized chiropractic accreditation

Update: What are the data showing?

Range of accreditation – depending on the region

However, there are some programs that have no regional accreditation, so the comparability of their standards is unknown.

- **Degree is accredited by a university**
- **No CCEI-recognized specialized chiropractic accreditation**

Entry Requirements: What are the data showing?

Direct-entry programs following secondary school

- Common internationally
- Many programs in Europe, Latin America, Australia, and Asia admit qualified students after secondary school
- Competitive academic selection and prerequisites may apply

Graduate-entry programs that require prior university education

- North American programs require pre-entry university education In the United States, commonly reported accreditation-based requirements include a bachelor's degree or 90 semester credits with a grade point average of 3.0

Didactic requirements: What are the data showing?

Minimum didactic or non-clinical education requirements for chiropractic graduation worldwide

The most significant finding is the **absence of consistently defined and publicly reported minimum didactic or non-clinical education requirements across international chiropractic programs.**

Although total educational requirements are frequently specified, **the allocation of instructional time between classroom learning, laboratory instruction, independent study, simulation, and clinical education is often unclear.**

Examples: Minimum didactic requirements

- North American programs commonly use total instructional hours
  - United States standards require at least 4,200 total instructional hours
  - Canadian programs report 4,200–4,500 or more hours
- European programs commonly use academic credits
  - Many programs report approximately 300 European Credit Transfer and Accumulation System credits across 5 years
  - Some programs report 180 or 360 ECTS, reflecting differences in degree structures and educational pathways
- Latin America requirements vary among institutions.
  - Brazilian programs report 3,600–4,200 total hours
  - Other programs report semester-based curricula or total credits without identifying the didactic component.

Clinical requirements: What are the data showing?

Minimum clinical training requirements

The most significant finding is the **considerable variation in how training requirements are defined, measured, and reported.**

Although supervised clinical education is an integral component of professional chiropractic programs worldwide, **many institutions do not publicly specify a minimum number of clinical training hours required for graduation.**

Minimum clinical requirements are not consistently reported or directly comparable internationally.

Examples: Minimum clinical requirements

- United States accreditation requires a minimum of 1,000 instructional hours in a patient-care setting
- One Canadian program reports approximately 1,000 hours of clinical internship or education, including a 12-month internship during the final year
- European programs frequently use integrated clinical education models. However, minimum clinical hours are not separately published.
- A French program specifies a 15-month clinical stage requiring at least 300 patient consultations, in addition to earlier practical and clinical training.
- Some Brazilian programs identify specific internship components, including one reporting at least 360 hours of supervised internship.

Summary:
We are still collecting and analyzing data

- There is still much to be explored
- There is variation among regions
- We are collecting input from many stakeholders
- We need a better understanding so that dialogue may occur to advance chiropractic education and training

Indicators of Substance and Quality in Chiropractic Education

Examples

- 4 programs
- 4 different world regions
- What = substance and quality?

Balgrist University Hospital

INTEGRATIVE SPINAL RESEARCH
Department of Chiropractic Medicine
Balgrist University Hospital
Zurich, Switzerland

University of Zurich[UZH]

WFC Education Conference
Utrecht, 16.10.2026

Chiropractic Education: Substance and Quality

Lindsay Gorrell
Chiropractic Medicine Study Program
University of Zurich, Switzerland

lindsaymary.gorrell@uzh.ch

Why Define Quality at All?

Accreditation confirms a program meets a baseline. It does not, by itself, tell you whether the education underneath is rigorous.

Substance needs its own indicators - visible to accreditors, institutions, and students alike, and grounded in what the profession's own standards bodies expect.

10

INDICATORS

across 4 domains of the training continuum

Curriculum · Clinical Training · Faculty · Outcomes

Domain 1: Curriculum

1

Evidence-based practice integrated throughout

Not a standalone module - EBP is applied within diagnosis, treatment planning, and case-based learning across the curriculum.

2

Alignment with core biomedical science content

Anatomy, physiology, pathology, pharmacology, and radiology taught to a depth comparable with medical programs.

3

Structured critical appraisal and research literacy

Success measured by whether graduates can independently evaluate primary literature (not just cite guidelines).

Domain 2: Clinical Training & Patient Safety

4 **Supervised clinical hours and patient contact volume**
Benchmarked globally, with transparent reporting of case mix and complexity.

5 **Competency-based clinical assessment**
OSCEs and direct observation tools - as the strongest single marker of rigor.

6 **Interprofessional education (IPE) exposure**
Structured contact with medical, physiotherapy, or nursing students and clinicians — integration, not isolation.

Domain 3: Faculty

7 **Proportion of faculty with PhDs or active research portfolios**
Including publication in peer-reviewed, indexed journals.

8 **Institutional research output and grant funding**
Evidence the program contributes to the evidence base, rather than only consuming it.

Domain 4: Institutional & Outcome Accountability

9

Public university accreditation and QA embedding

Subject to the same institutional review and Bologna-compliant degree structures as other medical and health science programs.

10

Graduate outcome tracking

Licensing exam pass rates, employment patterns, and - ideally - patient outcome data from graduates.

Take Home Message

Real quality is visible, measurable, and accountable.

Curriculum · Clinical Training · Faculty · Outcomes

= a continuum, from first year to practicing clinician

Thank you for your attention!

lindsaymary.gorrell.@uzh.ch

United States

Chris Petrie

Dean of Institutional Effectiveness and Data Strategy

NORTHWESTERN HEALTH SCIENCES UNIVERSITY

Regional Focus

- Domain 2: Clinical Training & Patient Safety
  - Supervised clinical hours and patient contact volume
  - Competency-based clinical assessment

- Domain 4: Institutional & Outcome Accountability
  - Accreditation and Continues Quality Improvement (CQI)
  - Graduate outcome tracking

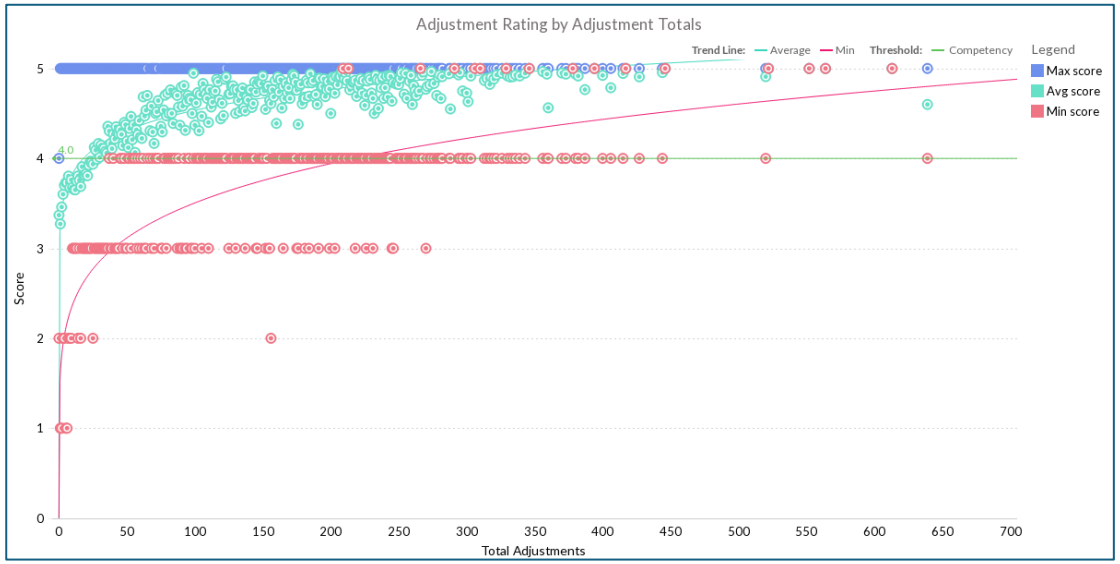
Institutional & Outcome Accountability

- Accreditation and CQI
  - Institutional
    - Regional (historically)
  - Programmatic
    - Council on Chiropractic Education (CCE)
  - Must evidence CQI processes for both (closing the loop)
- Graduate outcome tracking
  - Degree Completion (>70%[1])
  - Licensure Success (>80%[1])
  - Earnings (coming soon)

[1]CCE Manual of Policies. Council on Chiropractic Education. July 2026. www.cce-usa.org/publications.html

Clinical Training & Patient Safety

- Supervised clinical hours and patient contact volume
  - 1000+ hours of clinical training (CCE[1])
    - Supervised patient care
    - Rotations / Observations
    - Simulations / Case studies
  - Patient encounters
    - Minimum numbers vary
    - Variety of case types and complexities
- Competency-based clinical assessment
  - Meta-competency Outcomes (CCE[1])

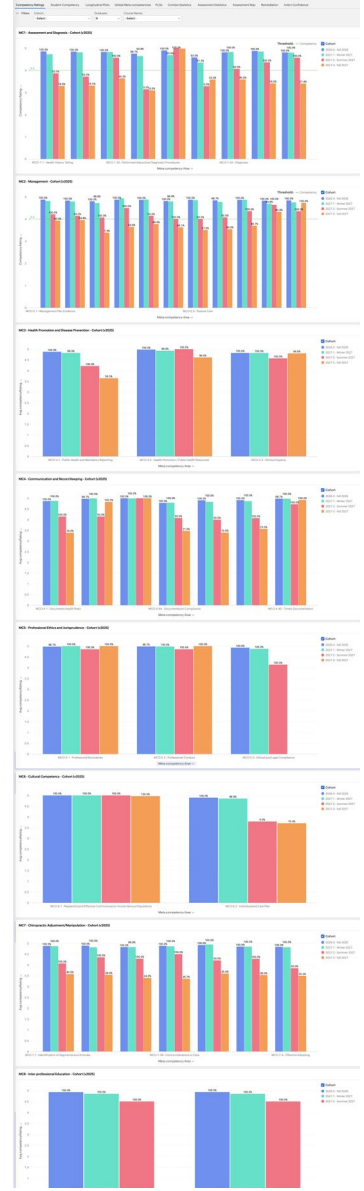


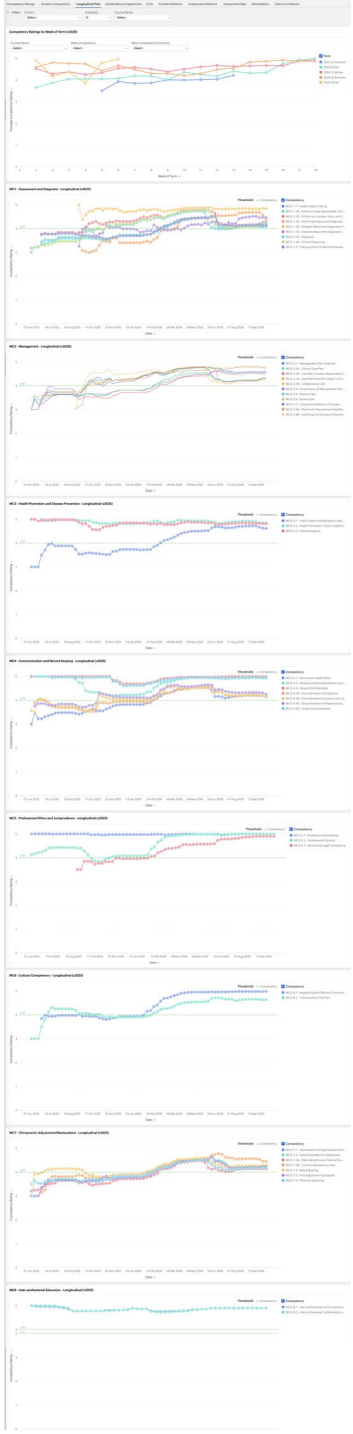
[1]CCE Accreditation Standards; Principles, Processes & Requirements for Accreditation. Council on Chiropractic Education. July 2026. www.cce-usa.org/publications.html

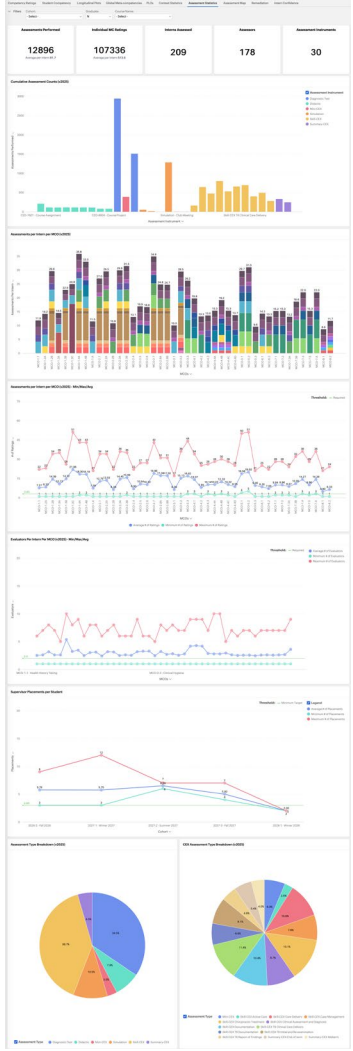
Exemplars from NWHSU

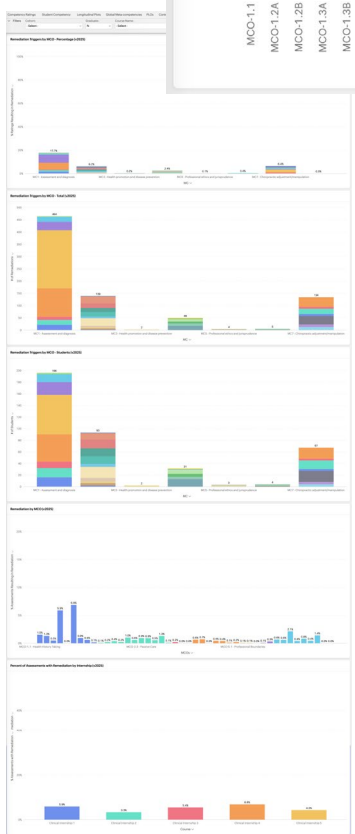
- Competency-based clinical assessment
  - Clinical Evaluation eXercise (CEX) system
    - Centered around a 5-point supervisory/entrustability rating scale (construct-aligned scale[1,2])
    - Defined performance expectations
    - Calibration training
    - Decayed average compositing
    - Data-rich, real-time reporting to all stakeholders
- CQI
  - KPI reporting system
    - Periodic summaries of data with associated analysis and recommendations
    - Each subsequent report includes a lookback at previous cycles, plans, and actions

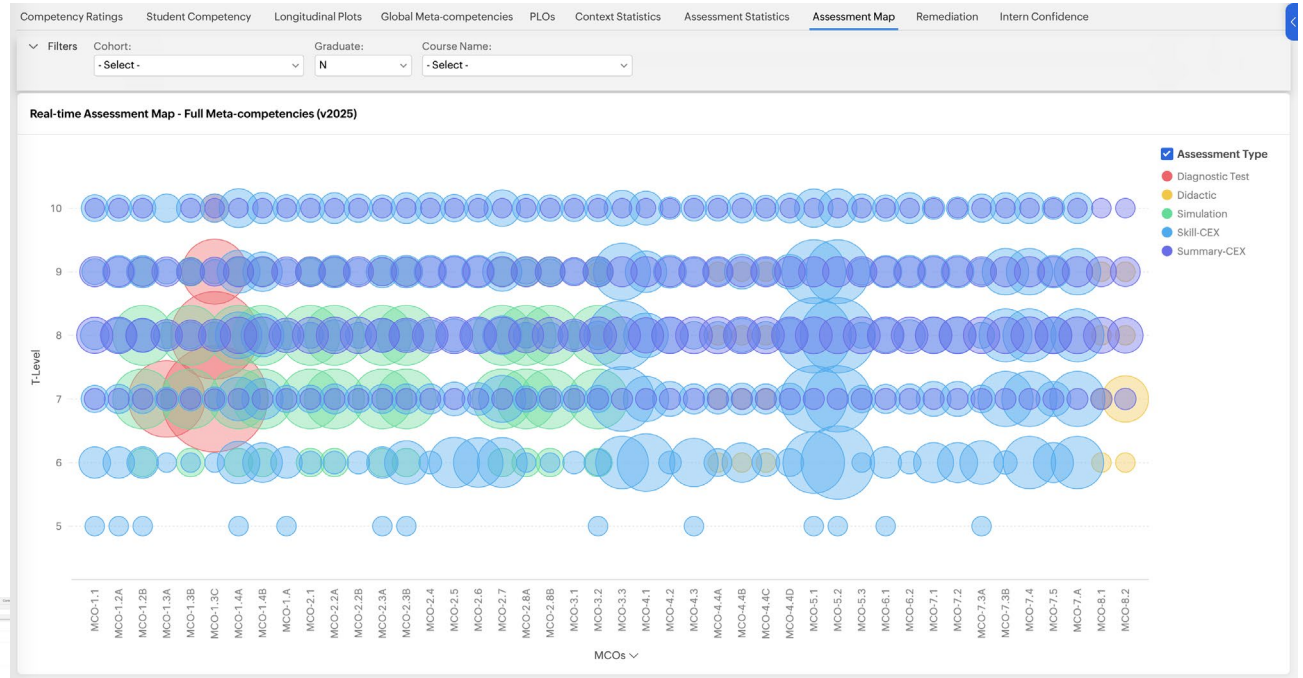
[1]Holmboe, Eric S.; Durning, Steven James; Hawkins, Richard E.. Practical Guide to the Evaluation of Clinical Competence (p. 686). Elsevier Health Sciences.
[2]Crossley J, Johnson G, Booth J, Wade W. Good questions, good answers: construct alignment improves the performance of workplace-based assessment scales. Med Educ. 2011;45:560–569.

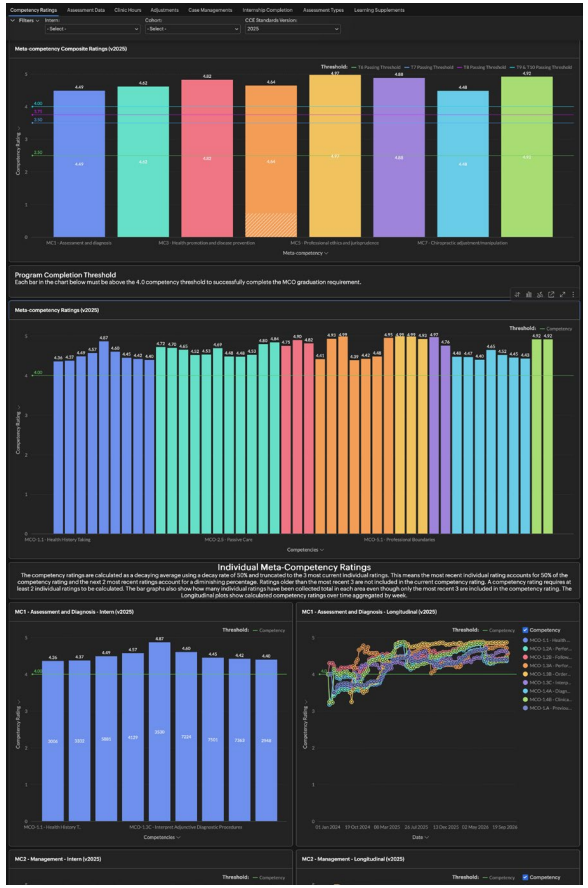


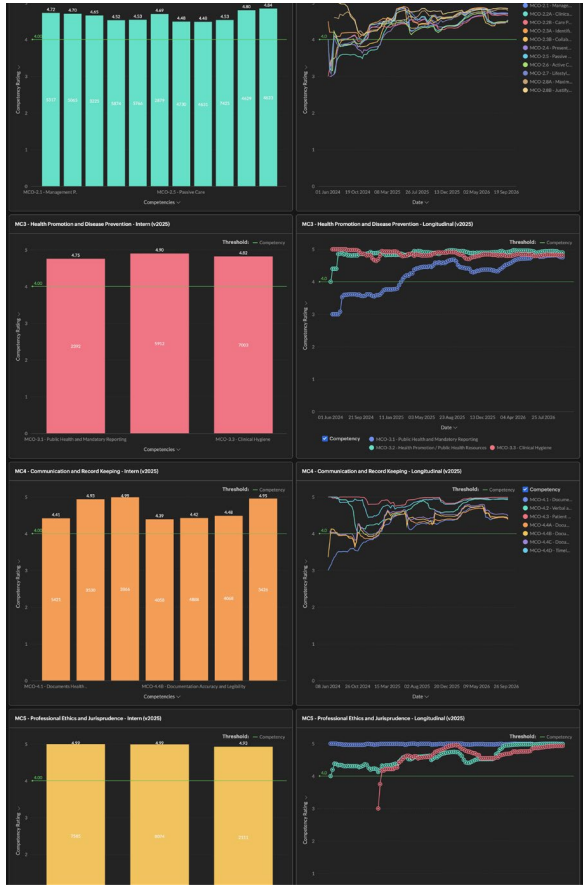



12896
107336
209
178
30

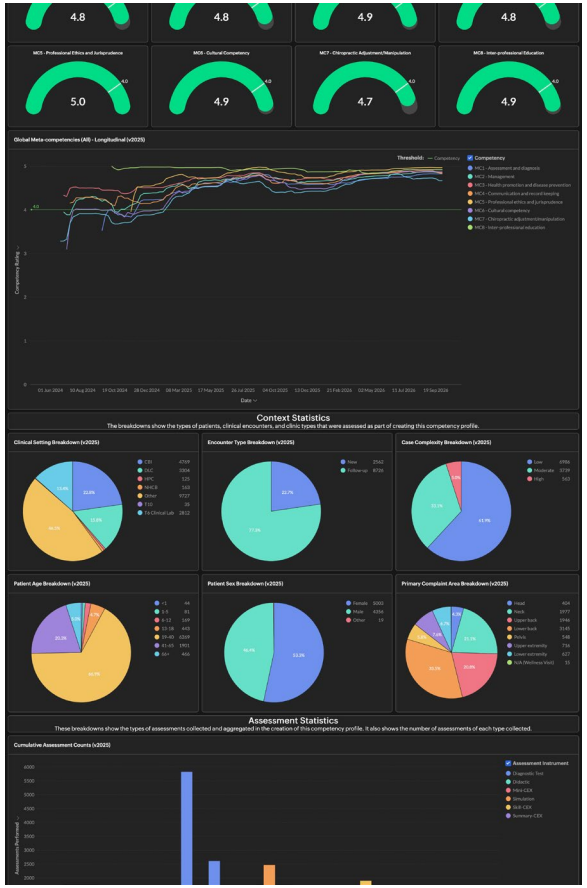



Competency Ratings
Student Competency
Longitudinal Plots
Global Meta-competencies
PLOs
Context Statistics
Assessment Statistics
Assessment Map
Remediation
Intern Confidence
Filters
Cohort:
- Select -
Graduate:
N
Course Name:
- Select -
Real-time Assessment Map - Full Meta-competencies (v2025)
Assessment Type
Diagnostic Test
Didactic
Simulation
Skill-CEX
Summary-CEX
T-Level
10
9
8
7
6
5
MCO-1.1
MCO-1.2A
MCO-1.2B
MCO-1.3A
MCO-1.3B
MCO-1.3C
MCO-1.4A
MCO-1.4B
MCO-1.A
MCO-2.1
MCO-2.2A
MCO-2.2B
MCO-2.3A
MCO-2.3B
MCO-2.4
MCO-2.5
MCO-2.6
MCO-2.7
MCO-2.8A
MCO-2.8B
MCO-3.1
MCO-3.2
MCO-3.3
MCO-4.1
MCO-4.2
MCO-4.3
MCO-4.4A
MCO-4.4B
MCO-4.4C
MCO-4.4D
MCO-5.1
MCO-5.2
MCO-5.3
MCO-6.1
MCO-6.2
MCO-7.1
MCO-7.2
MCO-7.3A
MCO-7.3B
MCO-7.4
MCO-7.5
MCO-7.A
MCO-8.1
MCO-8.2
MCOs


Competency Ratings
Assessment Data
Clinic Hours
Adjustments
Case Managements
Internship Completion
Assessment Types
Learning Supplements
Meta-competency Composite Ratings (v2025)
Program Completion Threshold
Each bar in the chart below must be above the 4.0 competency threshold to successfully complete the MCO graduation requirement.
Meta-competency Ratings (v2025)
Individual Meta-Competency Ratings
The competency ratings are calculated as a decaying average using a decay rate of 50% and truncated to the 3 most current individual ratings. This means the most recent individual rating accounts for 50% of the competency rating and the next 2 most recent ratings account for a diminishing percentage. Ratings older than the most recent 3 are not included in the current competency rating. A competency rating requires at least 2 individual ratings to be calculated. The bar graphs also show how many individual ratings have been collected total in each area even though only the most recent 3 are included in the competency rating. The Longitudinal plots show calculated competency ratings over time aggregated by week.
MC1 - Assessment and Diagnosis - Intern (v2025)
MC1 - Assessment and Diagnosis - Longitudinal (v2025)
MC2 - Management - Intern (v2025)
MC2 - Management - Longitudinal (v2025)


MC3 - Health Promotion and Disease Prevention - Intern (v2025)
MC3 - Health Promotion and Disease Prevention - Longitudinal (v2025)
MC4 - Communication and Record Keeping - Intern (v2025)
MC4 - Communication and Record Keeping - Longitudinal (v2025)
MC5 - Professional Ethics and Jurisprudence - Intern (v2025)
MC5 - Professional Ethics and Jurisprudence - Longitudinal (v2025)

MC6 - Cultural Competency - Intern (v2025)
MC6 - Cultural Competency - Longitudinal (v2025)
MC7 - Chiropractic Adjustment/Manipulation - Intern (v2025)
MC7 - Chiropractic Adjustment/Manipulation - Longitudinal (v2025)
MC8 - Inter-professional Education - Intern (v2025)
MC8 - Inter-professional Education - Longitudinal (v2025)
Global Meta-Competency Ratings
Global ratings aggregate individual competency areas together into a composite rating for the global areas. Global areas are only assessed directly using the Mini-CEX once you have met all the MCOs and are on preceptorship. Longitudinal plots show composited scores over time aggregated by week.


Global Meta-competencies (All) - Longitudinal (v2025)
Context Statistics
The breakdowns show the types of patients, clinical encounters, and clinic types that were assessed as part of creating this competency profile.
Clinical Setting Breakdown (v2025)
Encounter Type Breakdown (v2025)
Case Complexity Breakdown (v2025)
Patient Age Breakdown (v2025)
Patient Sex Breakdown (v2025)
Primary Complaint Area Breakdown (v2025)
Assessment Statistics
These breakdowns show the types of assessments collected and aggregated in the creation of this competency profile. It also shows the number of assessments of each type collected.
Cumulative Assessment Counts (v2025)

Adjustment Region Breakdown - Spine (v2025)
Adjustment Region Breakdown - Extremity (v2025)
Adjustment Patient Age Breakdown (v2025)
Adjustment Patient Type Breakdown (v2025)

UQTR

Université du Québec
à Trois-Rivières

Danica Brousseau, MSc., DC

Program director and full clinical professor

Université du Québec à Trois-Rivières, Canada

Université du Québec à Trois-Rivières

- One of only two programs in Canada
  - UQTR : Publicly-funded university
  - CMCC : Private, not-for-profit, institution
  - Both are competitive on admissions (selection process)

Université du Québec à Trois-Rivières

PROs

- Low tuition fees for students
- Small student cohorts
- Multiple healthcare programs
  - 15 programs
  - Almost 50% of all students
- Global institution-led student services

CONs

- Public funding = limited agility
  - limited financial, material and human resources
  - no control on tuition fees and teaching costs
  - generic policies and procedures
- Mandatory use of French language

Quality chiropractic education – UQTR

- Our strategies must be:
  - Faculty-led
  - Low-cost
  - Compatible with institutional requirements and systems
  - Available in French (tools, software, etc.)

Strategy #1 : control what you can

- Admissions / selection process
- Curriculum design
- Clinical requirements

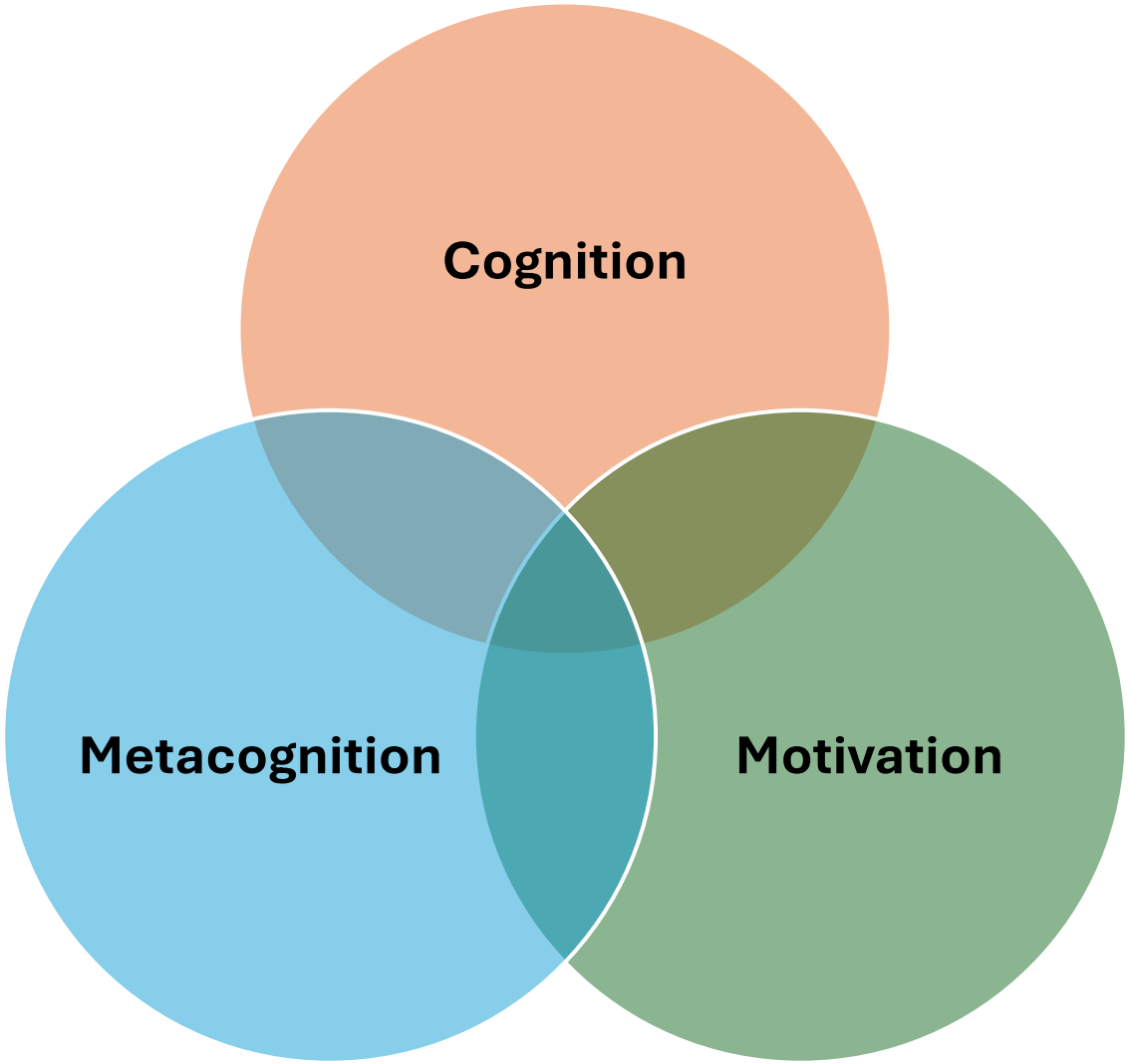
Strategy #2 : make good use of the university and interprofessional settings

- Expertise from other departments
- Mandatory IPE courses
- Faculty Community of Practice (CoP)
- Student services

Strategy #3 : make good use of small cohorts

- Small class, big difference!
- Multiple OSCEs and mini-OSCEs throughout the curriculum
- Reflective practice

Lifelong learning



Chiropractic Education: Substance and Quality

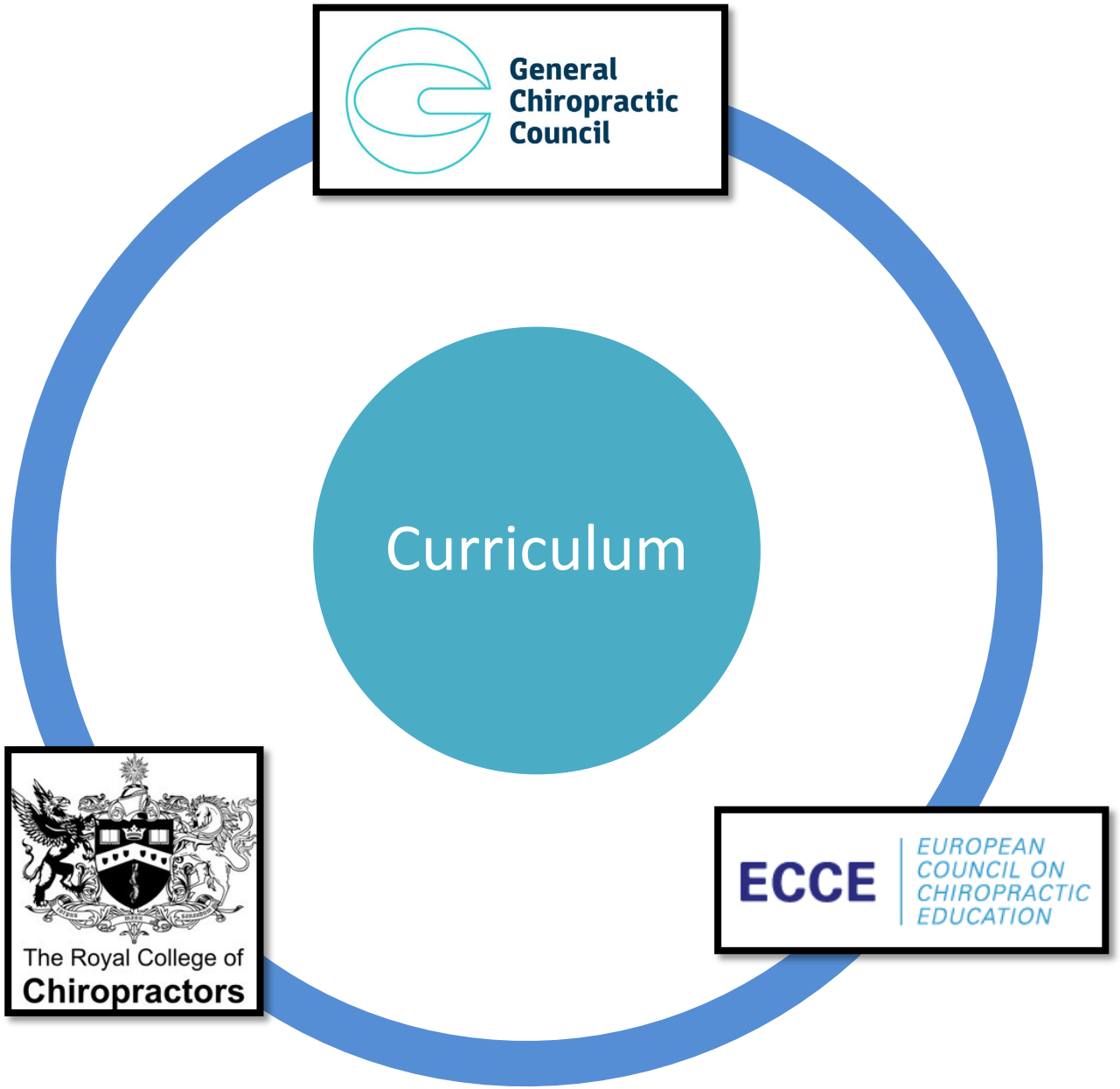
A UK perspective on standards, assurance and graduate readiness

Philip Dewhurst

HSU HEALTH SCIENCES UNIVERSITY

CURRICULUM

The Curriculum: Three Complimentary Frameworks

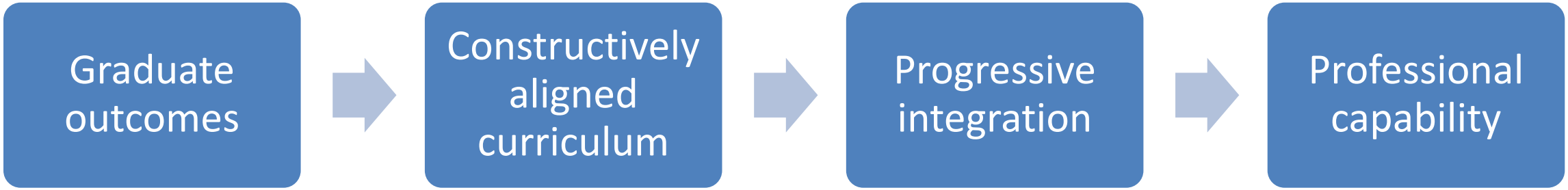


Shared purpose: safe, effective, evidence-informed practice

GCC Education Standards

A. Care of patients
B. Safety and quality
C. Professionalism
D. Clinical approaches
E. Collaborative healthcare
F. The programme
G. Resources
H. Teaching, learning and assessment
I. Patients
J. Learners

Curriculum: Beyond Content Coverage



- Map outcomes to learning, teaching and assessment
- Integrate biomedical knowledge, clinical reasoning and evidence-informed management
- Build professional behaviours and judgement progressively
- Integrated clinical exposure and experience

Assessment: Evidence of Competence and Readiness

- Knowledge and understanding of human Science
- Apply human sciences to patient presentations, examinations, diagnosis, management
- Demonstrate clinical reasoning and problem solving
- Demonstrate competent skills in examination and treatment
- Critically appraise, evaluate and interpret evidence to justify management strategies
- Effectively manage patients under supervised conditions

- Assessment for learning, not just of learning
- Authentic, robust assessment requires clear criteria, assessor development, and multiple sources of evidence

CLINICAL TRAINING

Clinical Education: Standards Become Practice

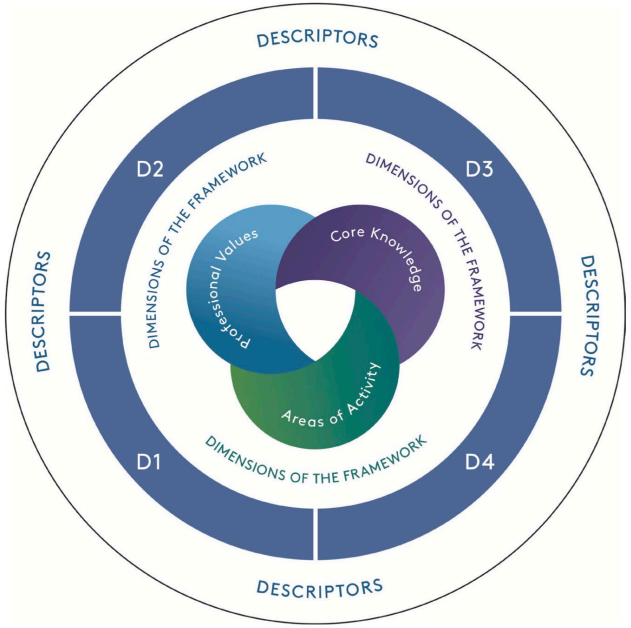
Clinical experience is not just a count of encounters.

COMPETENCY PILLARS
Clinical Practice
Education
Research
Ethical Practice Building
REFLECTIVE PILLARS
Public Health
Voluntary and Community Engagement
Leadership
OPTIONAL PILLARS
Specialist Placement
Global Perspective
PLACEMENT PORTFOLIO
Evidence • Reflection • Feedback • Development
AUTONOMOUS PRACTICE

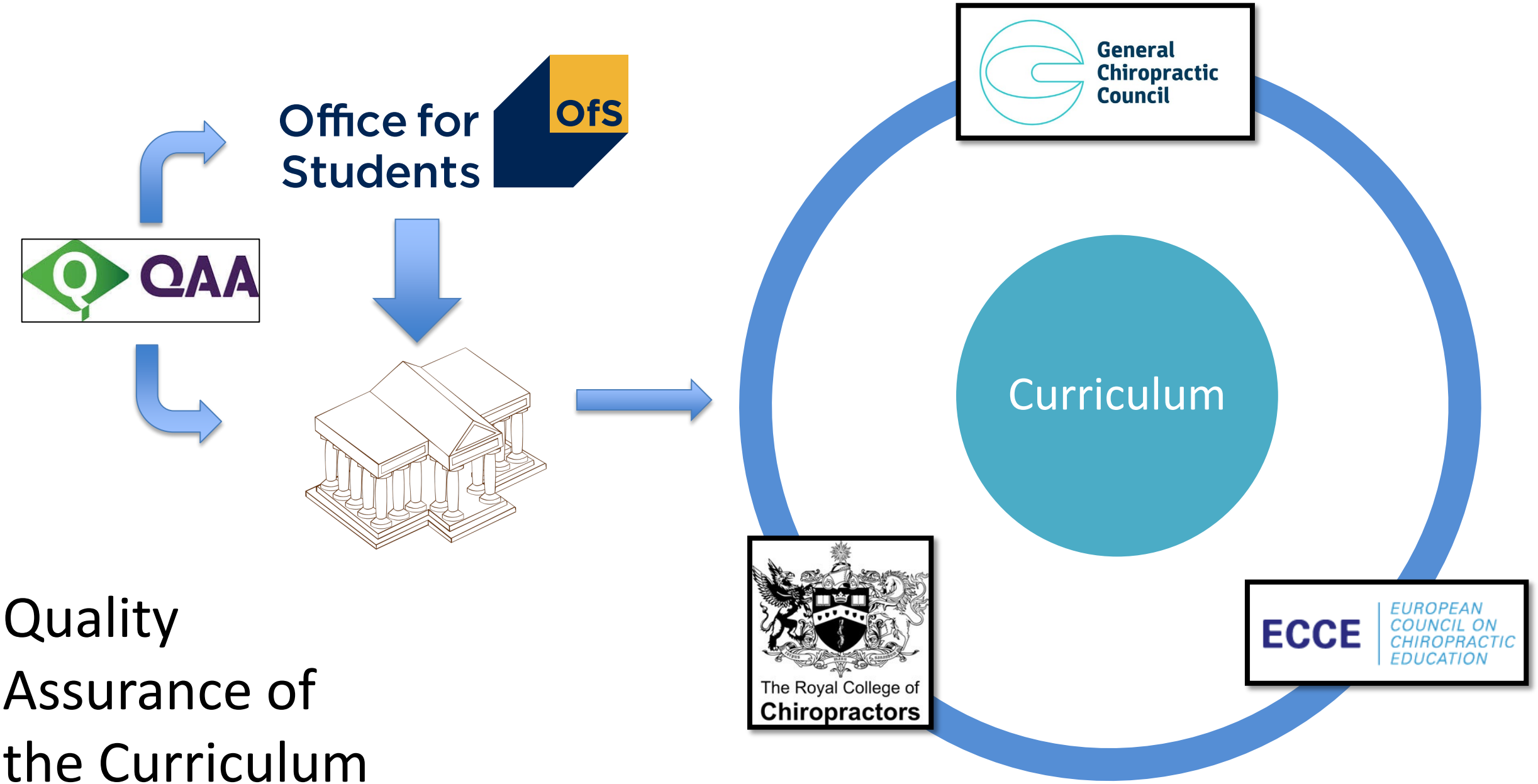
FACULTY

Academic Staff and Practice Educators

- Invest in staff to undertake education qualifications, creating educators who are chiropractors, not chiropractors who teach
- Support staff development as educators
- Recognise clinicians as practice educators
- Institutional research centres and funding
- PhD and Professional Doctorates

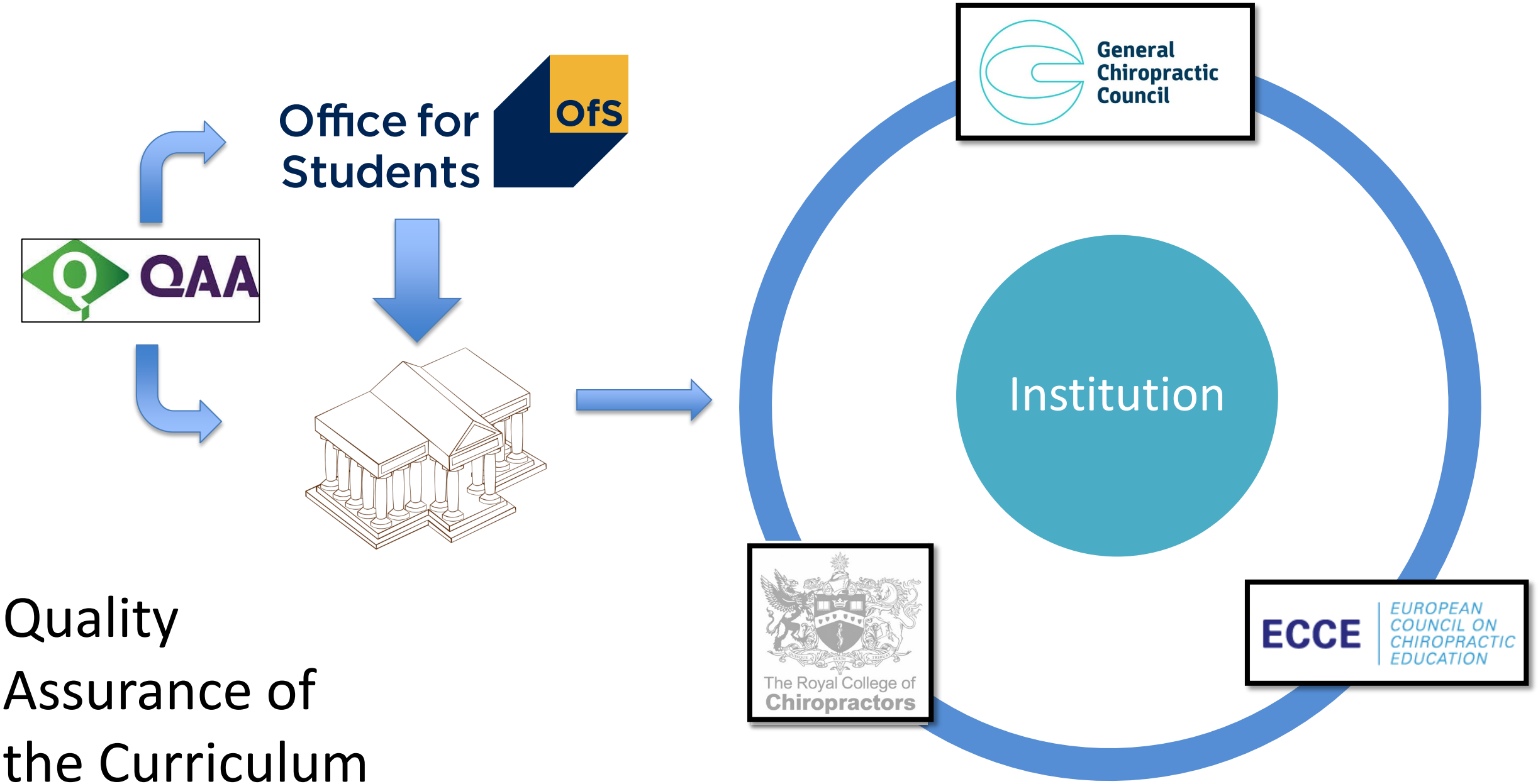


QUALITY ASSURANCE



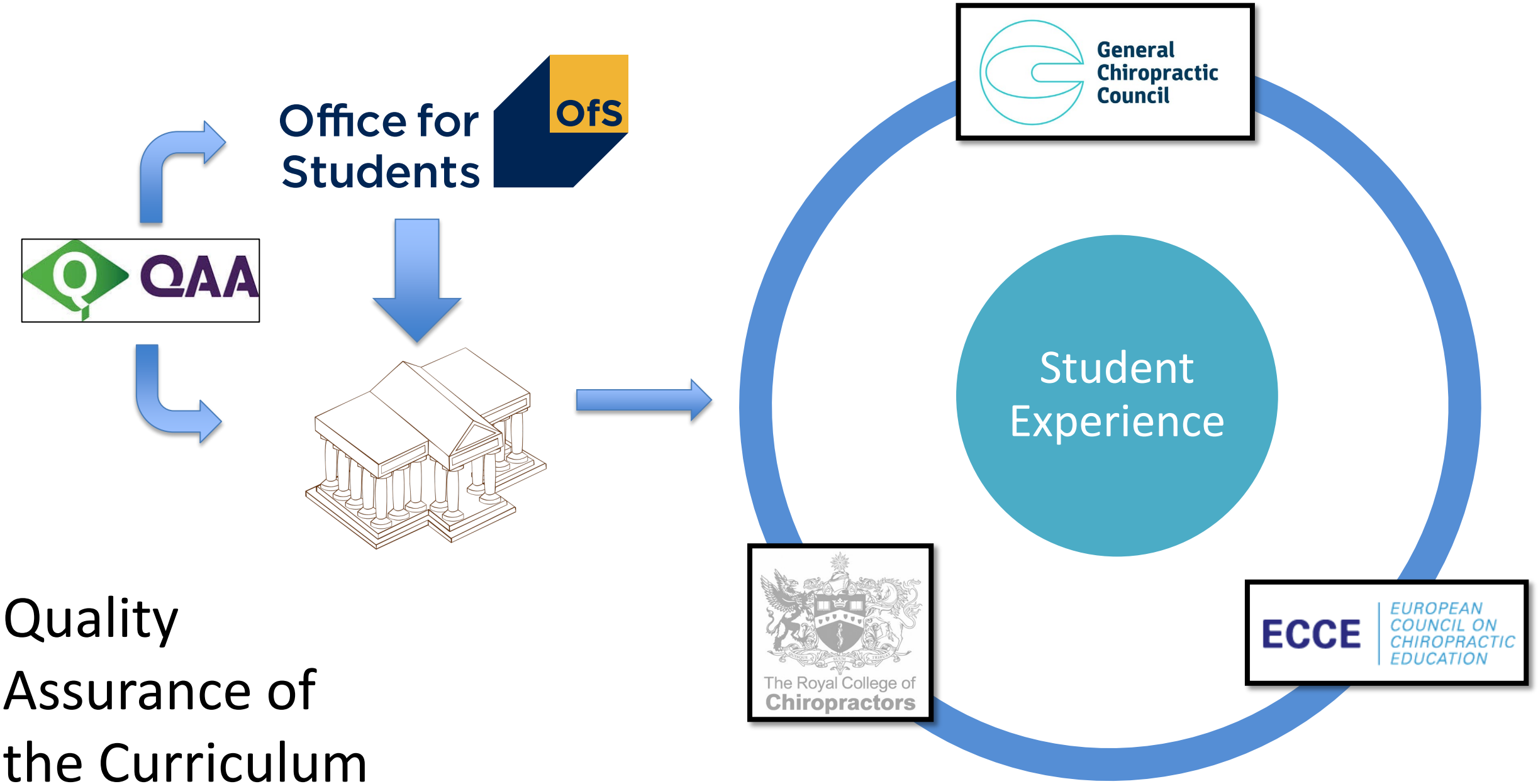
Quality Assurance of the Curriculum

Shared purpose: safe, effective, evidence-informed practice



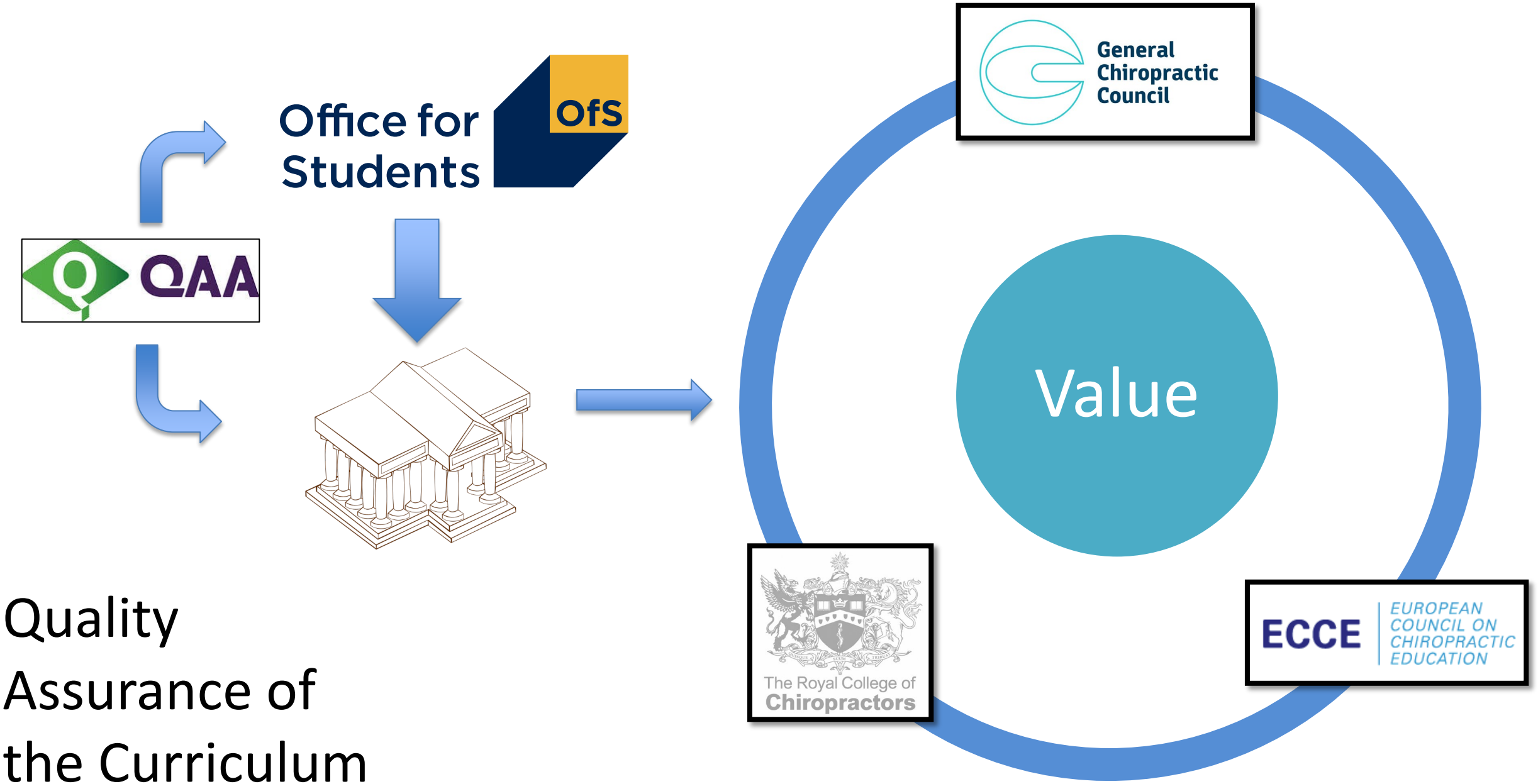
Quality Assurance of the Curriculum

Shared purpose: safe, effective, evidence-informed practice



Quality Assurance of the Curriculum

Shared purpose: safe, effective, evidence-informed practice



Quality Assurance of the Curriculum

Shared purpose: safe, effective, evidence-informed practice

From Compliance to Continuous Education

- DEFINE — graduate outcomes and educational standards
- DELIVER — coherent curriculum, assessment and clinical education
- EVALUATE — student performance, graduate feedback, clinical experience and external review
- ENHANCE — evidence-informed improvements

References

- European Council on Chiropractic Education. Standards and Guidelines for Quality Assurance in Chiropractic Programmes, 2025. https://www.cce-europe.org/wp-content/uploads/2025/05/2025-ECCE-STANDARDS-AND-GUIDELINES-final-version-for-publication-May-2025-1.pdf
- The General Chiropractic Council. Education Standards, 2023. https://www.gcc-uk.org/assets/downloads/GCC_Education_Standards_2024.pdf
- The Royal College of Chiropractors Outcomes for Graduates, 2026. https://rcc-uk.org/wp-content/uploads/Graduate-Outcomes_2026_web.pdf

Questions?

Application

Activity

- Individual
- Think of 1 idea of how substance and quality of lifelong learning can be improved for chiropractors
- Post your idea to Slido in 2 minutes

Do not edit
How to change the design

3 minutes.
Think of 1 idea of how substance and quality of lifelong learning can be improved for chiropractors.

The Slido app must be installed on every computer you're presenting from
slido

Activity

- Get together in Groups of 2-4
- Discuss which of these are the most implementable? How?
- Write down your response.
- You do not put this in Slido.
- In 10 minutes we will share in large group

Chiropractic Education: Substance and Quality

Thank you for your participation!

Chiropractic Education: Substance and Quality

Date: Friday, October 16, 2026 Time: 10:30 AM – 12:00 PM Session Number: WFCEdConf2026_F1B Credit Hours: 1.5

Bart Green, Lindsay Gorrell, Christopher Petrie, Danica Brousseau, Philip Dewhurst

Recommended Reading

European Council on Chiropractic Education. Standards and Guidelines for Quality Assurance in Chiropractic Programmes, 2025. https://www.cce-europe.org/wp-content/uploads/2025/05/2025-ECCE-STANDARDS-AND-GUIDELINES-final-version-for-publication-May-2025-1.pdf

Frank JR, Taber S, van Zanten M, Scheele F, Blouin D; International Health Professions Accreditation Outcomes Consortium. The essential enterprise: the critical role of accreditation in the 21st century. BMC Med Educ. 2020 Sep 28;20(Suppl 1):304. doi: 10.1186/s12909-020-02120-6. PMID: 32981522; PMCID: PMC7520973.

Johnson CD, Green BN, Amorin-Woods L, Byfield D, Crespo-Rivera W, Dewhurst P, Doucet C, Dunn A, Fox M, Jones-Harris A, Kolberg C, Korporaal CM, Little C, Moore D, Mrozek J, Schultz G, Snow G, Whillier S, Wickes D, Wong YK, Yelverton C, Himelfarb I. Program standards and student competencies among global chiropractic accreditation agencies: a content analysis. BMC Med Educ. 2025 Oct 21;25(1):1473. doi: 10.1186/s12909-025-08052-3. PMID: 41121086; PMCID: PMC12542019.

Nair BKR, Bleasel J, Mwangi F, Malau-Aduli BS. Reimagining faculty development: A paradigm shift from content to transformative learning processes. Med Teach. 2025 Jun;47(6):976-984. doi: 10.1080/0142159X.2024.2390035. Epub 2024 Aug 18. PMID: 39154226.

Sandars J, Allan D, Price J. Reflective practice by health professions educators to enhance learning and teaching: AMEE Guide No. 166. Med Teach. 2024 Jul;46(7):864-873. doi: 10.1080/0142159X.2023.2259071. Epub 2023 Sep 25. PMID: 37748119.

Specian Junior, F. C., Schmidt, H. G., & Cecilio-Fernandes, D. Twelve tips for implementing deliberate reflection in clinical reasoning education. Med Teach 2026 : 1–7. Published online Sept.22, 2026. https://doi.org/10.1080/0142159X.2026.2733150

The General Chiropractic Council. Education Standards, 2023. https://www.gcc-uk.org/assets/downloads/GCC_Education_Standards_2024.pdf

The Royal College of Chiropractors Outcomes for Graduates, 2026. https://rcc-uk.org/wp-content/uploads/Graduate-Outcomes_2026_web.pdf

Yelon SL, Ford JK, Anderson WA. Twelve tips for increasing transfer of training from faculty development programs. Med Teach. 2014 Nov;36(11):945-50. doi: 10.3109/0142159X.2014.929098. Epub 2014 Jul 2. PMID: 24984563.