

Evolution of osteopathic education in Quebec: toward the first university program

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OIA Conference

AGENDA

1. Project context

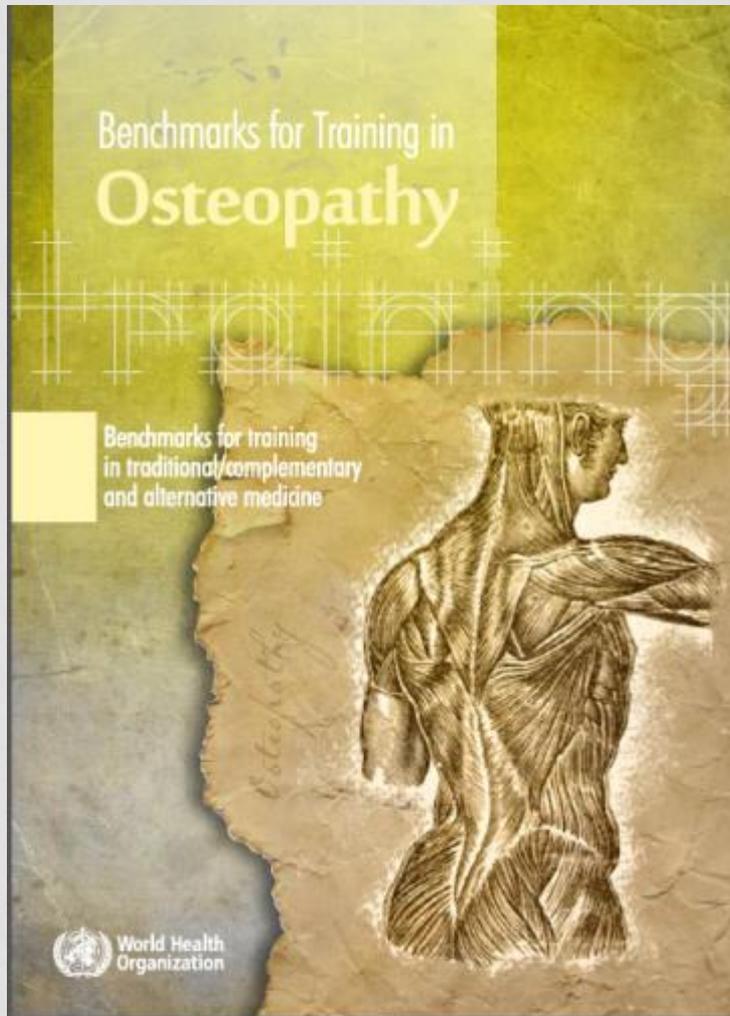
- World Health Organization (WHO), Office des professions du Québec, Université de Sherbrooke
- Contribution from meetings as well as personal, provincial and international work

2. Guidelines for the development of the program

- Use a professionalization path
- Further a patient-centered approach
- Promote deep learning
- Enable scientific contribution to the osteopathic field

3. Post-legislative perspectives

1. PROJECT CONTEXT



The university program:

- Will follow one of WHO's¹ recommended paths by targeting working health professionals and requiring the completion of at least 1000 hours
- Will lead to a Professional Science Master's degree (about 1255 h)

¹WHO, 2010

1. PROJECT CONTEXT



Osteopathic professional order current status:

- Report received from the Committee of Experts
- Agreement of health science professional orders in progress
- Discussions held with Québec Universities
- Legislative process is progressing according to plan

1. PROJECT CONTEXT



UNIVERSITÉ DE
SHERBROOKE

- Supported by the Faculty of Medicine and Health Sciences of the Université de Sherbrooke
- Recipient of the Innovation Fund in teaching from the Université de Sherbrooke

1. PROJECT CONTEXT

- Right after being accepted by the Bureau de Coopération Interuniversitaire (BCI), the university program will be implemented in a short period of time (probably autumn 2016 or 2017)

1. PROJECT CONTEXT

- Inspired by meetings:
 - With the Université du Québec à Trois-Rivières in 2003¹
 - Implementation of a competency approach at the Centre ostéopathique du Québec (COQ)
 - At the COQ
 - Pedagogical team collaboration between 2004 and 2014 on osteopathic concepts and innovative pedagogical methods
- Inspired by researches and conferences:
 - On furthering deep learning and learning theories
 - For example: Cognitive Load Theory (CLT) applied to palpation
 - On clinical reasoning process
 - Research papers read as part of doctoral studies
 - Montreal International Conference on Clinical Reasoning in 2012
 - For example: Esteves' research which links clinical reasoning with palpation²

¹Cloutier & Dubois, 2003; ²Esteves & Spence, 2014

1. PROJECT CONTEXT

- Implementation of a new palpation protocol at the COQ
 - Presented at OsEAN conference in Postdam (2010)
 - Paper published in IJOM (2014)¹
- Scientific aspect and importance of organized research in osteopathy
 - Workshop at OsEAN conference in Paris (2011)
 - Worth of case studies
- Participation in the Education conference at the BSO (2013)
 - *Tomorrow's Osteopaths - Designing and Implementing an Osteopathic Curriculum*
- Development of a university level osteopathic curriculum fuelled by the results of a survey on the most common reasons for osteopathic consultation in Québec²
- Specific interest on new pedagogical and evaluative methods in osteopathy
 - Many readings as part of doctoral studies
 - Presentation on concept-mapping at OsEAN conference in Barcelona (2014)

¹Aubin and al., 2014; ²Morin and Aubin, 2014

1. PROJECT CONTEXT

- Pondering about osteopathic identity, professionalism, principles and practical field:
 - Stephan Tyreman's work
 - Patient-centered care literature
 - Chantal Morin's findings on interprofessional collaboration (IPC) as part of her doctoral studies
 - Papers on functional syndromes and biopsychosocial components^{1,2}
 - Professionalism literature³
 - Special issues of IJOM on Education (2013 and 2104) and Osteopathic Principles (2013)
 - Consultation with Quebec osteopathic community (November 2013)

¹Juster & al., 2010; ²Williams & al., 2008; ³Hilton & Southgate, 2007

2. GUIDELINES

- Use a professionalization path
- Further a patient-centered approach
- Promote deep learning
- Enable scientific contribution to the osteopathic field

2. GUIDELINES

Professionalization path

- Intertwines the competency approach in to a professionalization-oriented curriculum
- Puts competency at the core of professional situation in regards to clinical practice and scientific development
- Focuses on practical aspect (about 730 practical hours vs about 525 theory hours)
- Insists on the necessity of a well-established learning progression, the importance of reflexive thinking and the usefulness of collaborative teaching

2. GUIDELINES

Professionalization path

- Clinical situations:
 - Lead osteopathic consultations for all types of clientele presenting a broad range of functional disorders affecting one or many body tissues in order to improve the client's condition and autonomy with regards to his reason for consultation and based on his initial condition.
- Scientific situations:
 - Produce an meaningful written scientific document on an aspect of osteopathic clinical knowledge which could promote the development and/or enrichment of the osteopathic field.

2. GUIDELINES

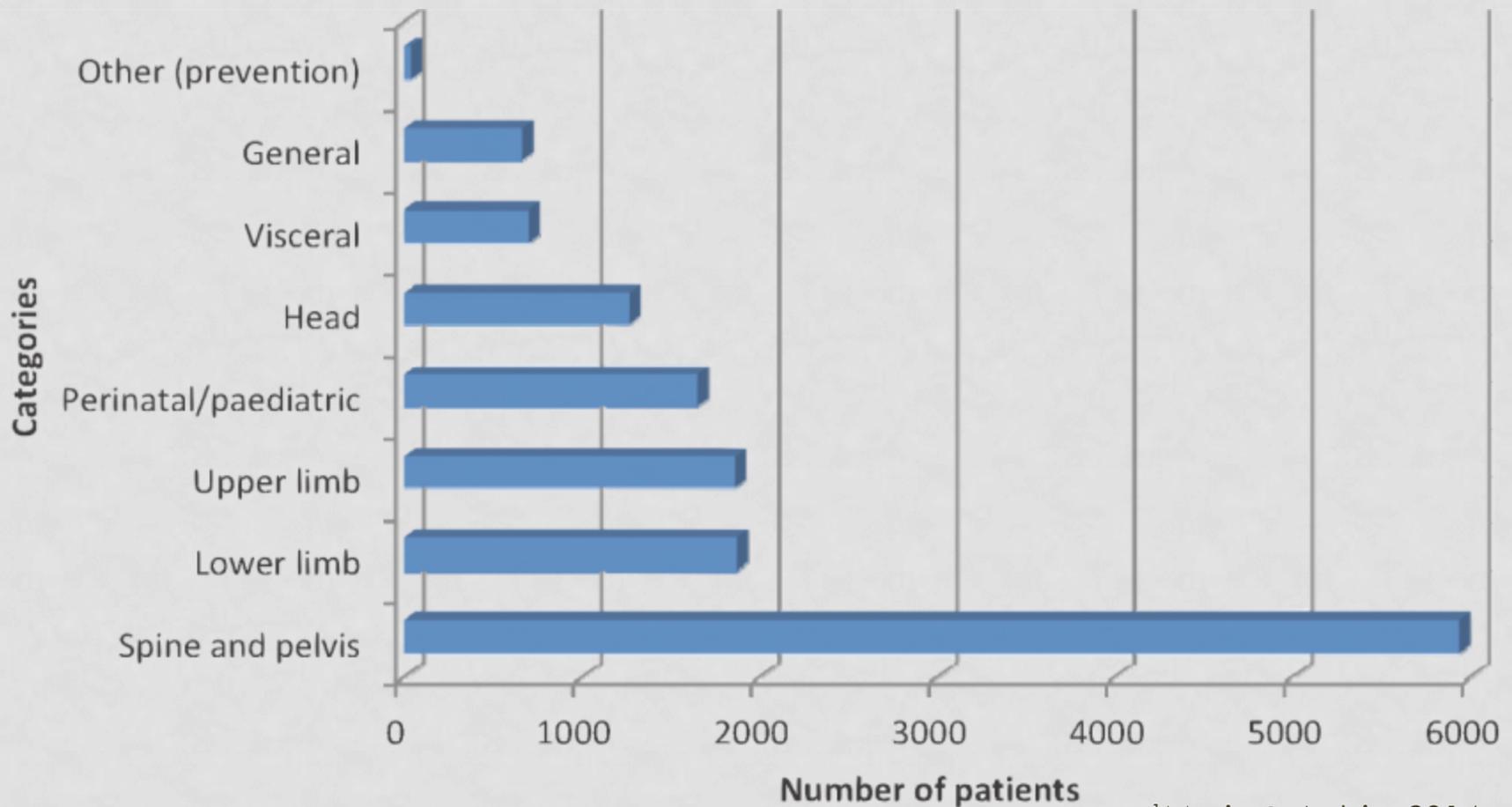
Professionalization path

- Includes the three osteopathic fields:
musculoskeletal, craniosacral and visceral
 - Those three fields have been associated to the osteopathic scope of practice according to the survey results on reasons for osteopathic consultation in Québec¹

2. GUIDELINES

Professionalization path

Primary reasons for osteopathic consultation in Quebec (n=14002)¹



¹Morin & Aubin, 2014

2. GUIDELINES

Professionalization path

| CONTRÔLE DES CAS APP/ARC EN FONCTION DES MOTIFS DE CONSULTATION (Morin & Rubin, 2014) SITUATION PROFESSIONNELLE CLINIQUE PROGRAMME DE MATRISE EN OSTÉOPATHIE DE HERBROOKE | | | | | | | | | | | | | | |
|---|------------|--------|--------|--------|--------|----------------|------------|------------|---------|---|----------------|-------|--|-------------------------------------|
| PHASES DU PROGRAMME | PHASE 1 | | | | | PHASE 2 | | | PHASE 3 | | PHASE 4 | TOTAL | FREQUENCE D'APPARITION DANS LE PROGRAMME | POURCENTAGES PRÉVUS PAR LE SONDAGE* |
| | Initiation | | | | | | | | | | | | | |
| MUSCULO-SQUELETTIQUE | | | | | | | | | | | | 34 | 58,62% | 69% |
| BASSIN | | OST112 | OST112 | OST112 | OST112 | X | | | | | | 5 | 8,62% | 4,7% |
| COLONNE VERTÉBRALE | | | | | | | | X | | X | | 2 | 3,45% | 3,1% |
| RÉGION LOMBAIRE | | OST113 | X | X | | | X | | | | | 4 | 6,90% | 14,5% |
| RÉGION DORSALE ET CÔTES | | OST113 | X | | | X | | | | X | | 4 | 6,90% | 7,1% |
| RÉGION CERVICALE | | OST113 | OST113 | | | X | | | | X | | 4 | 6,90% | 12,8% |
| MEMBRE INFÉRIEUR | OST100 | | | | | | | | | | OST240,ARC | 8 | 13,79% | 13,0% |
| HANCHE | | OST111 | X | | | | | X | | | | 3 | 5,17% | 3,2% |
| GENOU | | OST111 | X | | | | | | | | | 2 | 3,45% | 3,5% |
| CHEVILLE ET PIED | | OST111 | | | | | | | | | | 1 | 1,72% | 3,2% |
| MEMBRE SUPÉRIEUR | | | | | | | | | | | OST240,ARC | 6 | 10,34% | 12,0% |
| COMPLEXE DE L'ÉPAULE | | OST111 | X | | X | | | | | | | 3 | 5,17% | 7,9% |
| COUDE | | OST111 | | | | | | | | | | 1 | 1,72% | 1,4% |
| POIGNET ET MAIN | | OST111 | | | | | | | | | | 1 | 1,72% | 1,4% |
| GÉNÉRAL | OST100 | | | | | | | | | | | 1 | 1,72% | |
| SPHÈRE VISCÉRALE | | | | | | | | | | | | 18 | 31,03% | 5,0% |
| DIAPHRAGME | OST100 | | | OST113 | OST113 | | | | | | | 3 | 5,17% | |
| SYSTÈME DIGESTIF | | | | | | | | | | | | 7 | 12,07% | 2,7% |
| ÉTAGE SUS-MÉSOCOLIQUE | OST100 | OST130 | OST130 | OST130 | OST130 | | | | | | | 4 | 6,90% | |
| ÉTAGE SOUS-MÉSOCOLIQUE | | OST130 | OST130 | OST130 | OST130 | | | | | | | 3 | 5,17% | |
| THORAX | | | | | | | | | | | | 5 | 8,62% | |
| CAISSON - SYSTÈME SUSPENSEUR | | | | | | OST230 | | | | | OST240 | 2 | 3,45% | |
| PLÈVRES - POUMONS | | | | | | OST230 | OST230 | OST230,ARC | | | | 3 | 5,17% | 0,7% |
| SPHÈRE GYNÉCOLOGIQUE | | | | | | OST230 | OST230,ARC | | | | | 2 | 3,45% | 1,4% |
| TENDON CENTRAL | | | | | | OST240 | | | | | | 1 | 1,72% | |
| RÉGION DE LA TÊTE | | | | | | | | | | | | 16 | #DIV/0! | 9,1% |
| CONTENANT D'OSSEUX | OST100 | OST120 | OST120 | OST120 | OST120 | | | | | | OST220 | 7 | 12,07% | |
| CONTENANT MEMBRANEUX | OST100 | | | | | | | | | | | 4 | 6,90% | 6,0% |
| CONTENU: SNC, ORGANES DES SENS, IDRL | | OST120 | OST120 | | | OST240,ARC | OST220,ARC | | | | | 2 | 3,45% | 1,2% |
| ATMOSPHÈRE | | | | | | OST220 | OST220,ARC | X | | | | 3 | 5,17% | 1,4% |
| GÉNÉRAL, TEX, ÉPHELÈES/MIGRAINES | | | | | | OST220,ARC | | OST240,ARC | | | | 1 | #DIV/0! | |
| PÉRINATALITÉ | | | | | | | | | | | | 5 | 8,62% | 10,3% |
| BÉBÉS | | | | | | OST250 | OST250 | | | | | 4 | 6,90% | |
| ENFANTS | | | | | | OST250,ARC | X | | | | | 1 | 1,72% | |
| FEMMES ENCEINTES | | | | | | OST250 | | | | | | 1 | 1,72% | |
| CONDITIONS GÉNÉRALES | | | | | | | | | | | | 2 | 3,45% | 5,0% |
| SYSTÈME DE RÉGULATION ET PROBLÈMES D'ENDORMIEMENT | | | | | | | | | | | OST300,ARC | 1 | 1,72% | |
| PEAU, ALLERGIES, ECZÉMA | | | | | | | | | | | | | | |
| DOULEURS CHRONIQUES | | | | | | | | | | | OST300,ARC | 1 | 1,72% | |
| TOTAUX CAS | 6 | 28 | | | | | 22 | | | 2 | | 0 | 58 | |
| | 34 APP | | | | | 12 APP, 10 ARC | | | 2 ARC | | 46 APP, 12 ARC | | | |

2. GUIDELINES

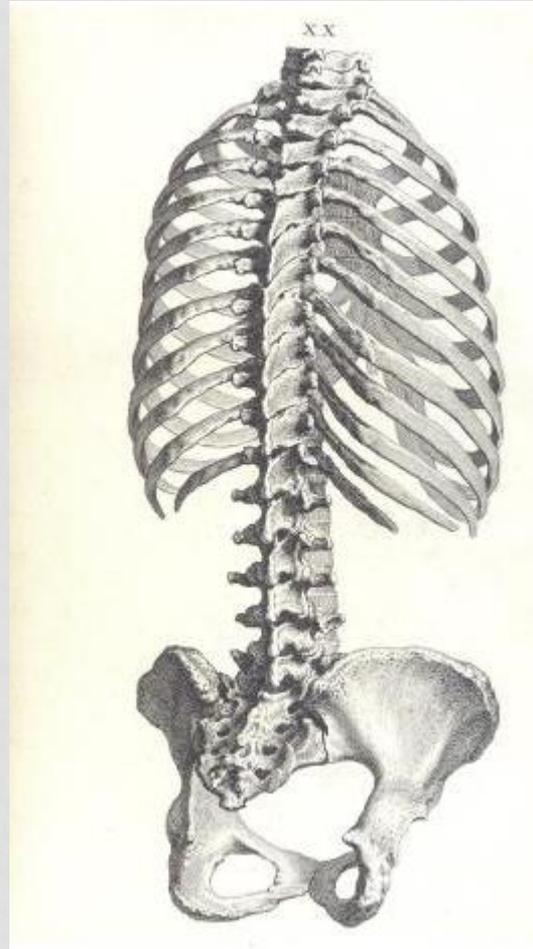
Professionalization path

- Learning progression according to the complexity of the reason for consultation
 - Phase 1: Local problems
 - Phase 2: Regional problems
 - Phase 3: Complex or systemic problems
 - Phase 4: Integration of all types of reason for consultation



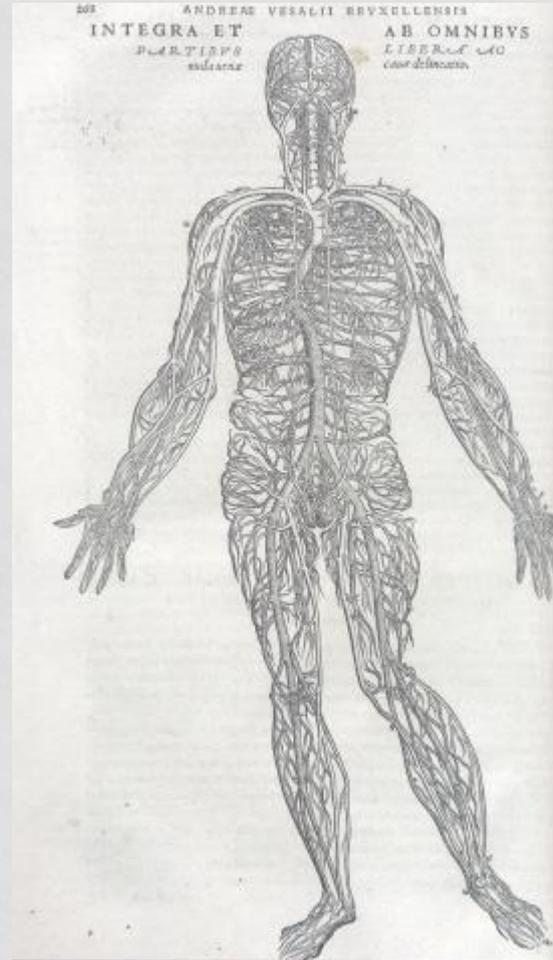
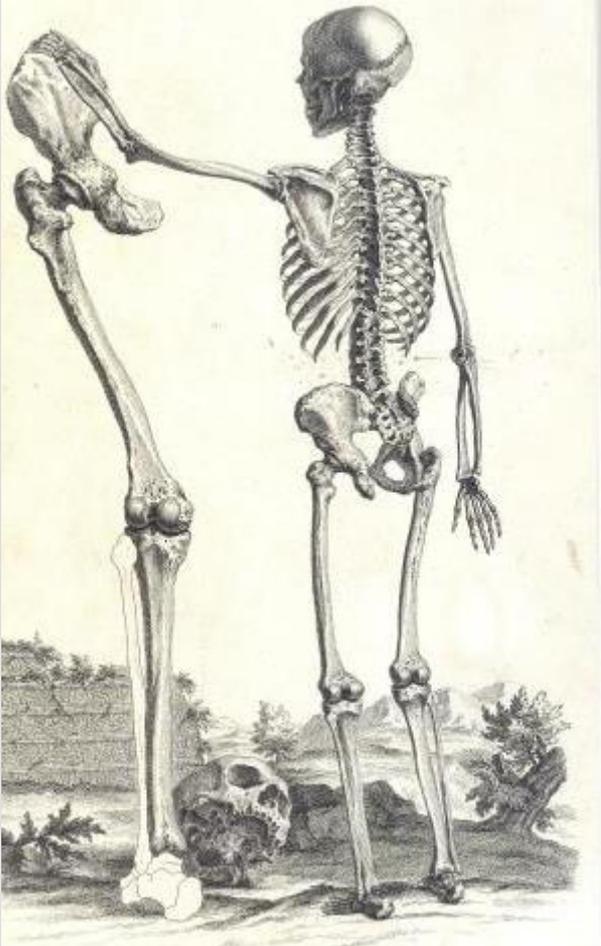
2. GUIDELINES

Professionalization path: Local problems

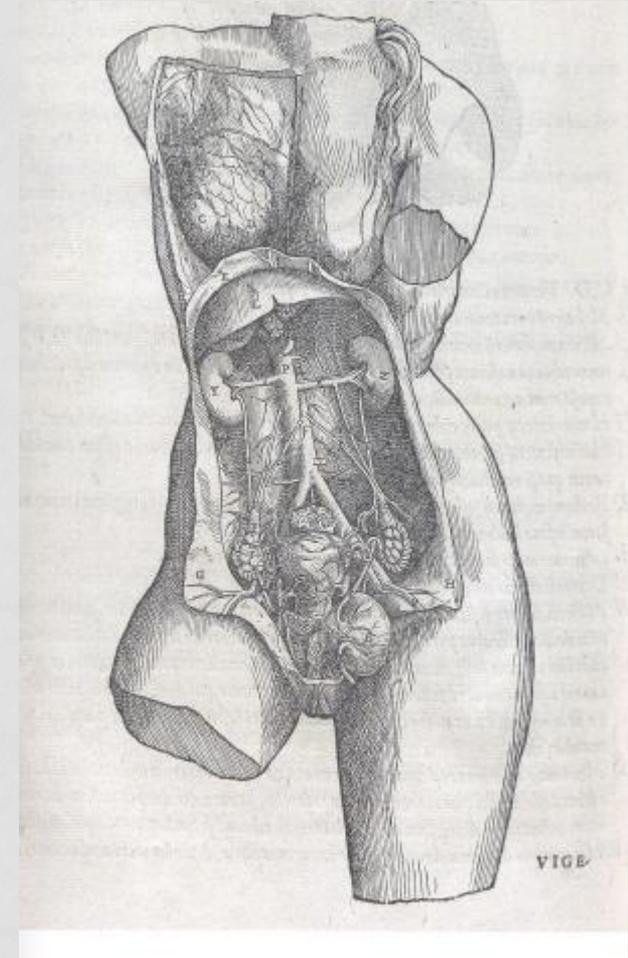


2. GUIDELINES

Professionalization path: Regional problems



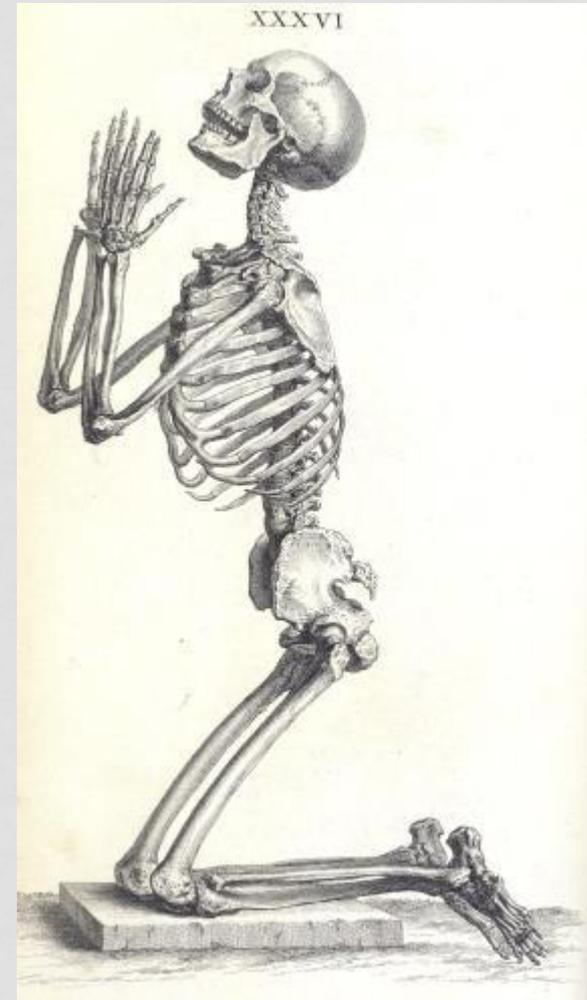
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2. GUIDELINES

Professionalization path: Complex or systemic problems



2. GUIDELINES

Professionalization path

PHASE 1

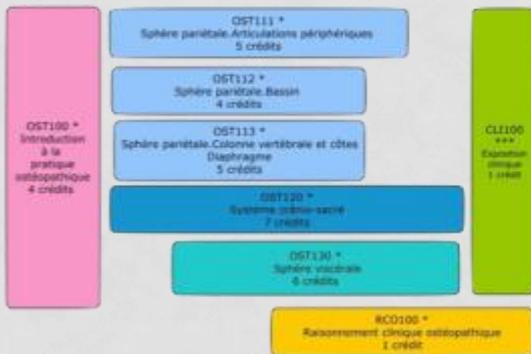
PHASE 2

PHASE 3

PHASE 4

SITUATION PROFESSIONNELLE CLINIQUE

Au terme de l'étape 1 de la situation professionnelle clinique, l'étudiant sera en mesure de :
Mener une consultation ostéopathique auprès d'une clientèle adolescente, adulte ou aînée présentant un désordre fonctionnel d'envergure locale affectant une des trois sphères ostéopathiques



Au terme de l'étape 2 de la situation professionnelle clinique, l'étudiant sera en mesure de :
Mener une consultation ostéopathique auprès de tout type de clientèle (incluant les femmes enceintes et les bébés) présentant un désordre fonctionnel d'envergure locale ou régionale affectant une ou plusieurs sphères ostéopathiques.



Au terme de l'étape 3 de la situation professionnelle clinique, l'étudiant sera en mesure de :
Mener une consultation ostéopathique auprès d'une clientèle adolescente, adulte ou aînée présentant un désordre fonctionnel complexe ou systémique affectant une ou plusieurs sphères ostéopathiques

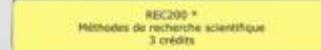


Au terme de l'étape 4 de la situation professionnelle clinique, l'étudiant sera en mesure de :
Mener une consultation ostéopathique pour toute clientèle présentant un désordre fonctionnel de toute d'envergure affectant un ou des tissus du corps

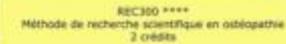


SITUATION PROFESSIONNELLE SCIENTIFIQUE

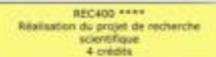
Au terme de l'étape 1 de la situation professionnelle scientifique, l'étudiant sera en mesure de :
Circonscrire un aspect de la pratique professionnelle clinique qui présente des limitations au niveau des connaissances ou de la pratique



Au terme de l'étape 2 de la situation professionnelle scientifique, l'étudiant sera en mesure de :
Procéder à la collecte de données



Au terme de l'étape 3 de la situation professionnelle scientifique, l'étudiant sera en mesure de :
Rédiger un document scientifique et diffuser les résultats de l'étude auprès de différents acteurs de la communauté ostéopathique



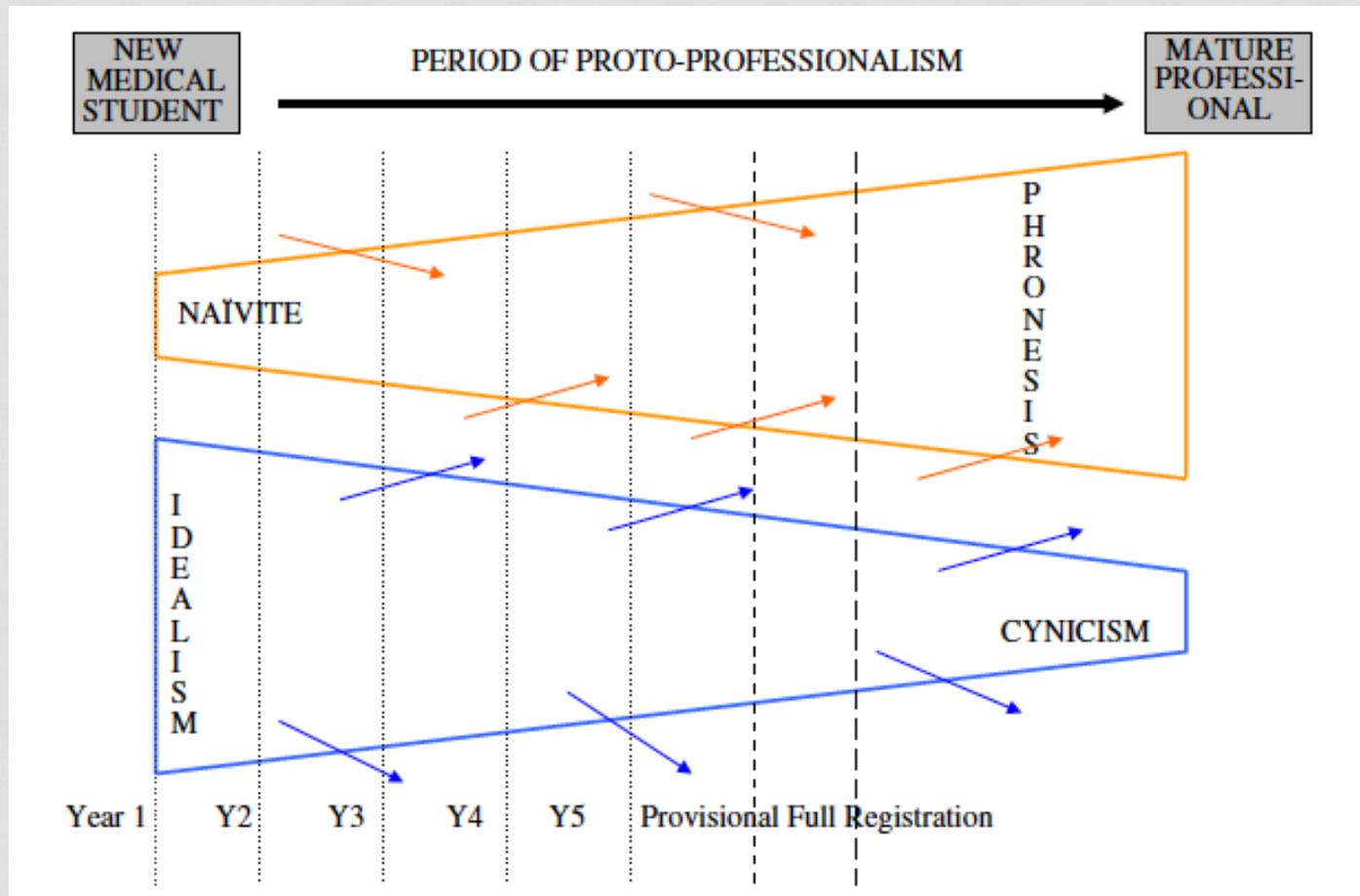
2. GUIDELINES

Patient-centered approach

- Biopsychosocial model (*WHO, 2010*)¹:
 - Integrates the psychological, emotional, social and environmental aspects of a patient with pain or functional problem
 - Recognizes the importance of a balanced therapeutic relation between patients and therapists regarding decision making process
- Strongly related to the clinical reasoning process
- Linked to professionalism²

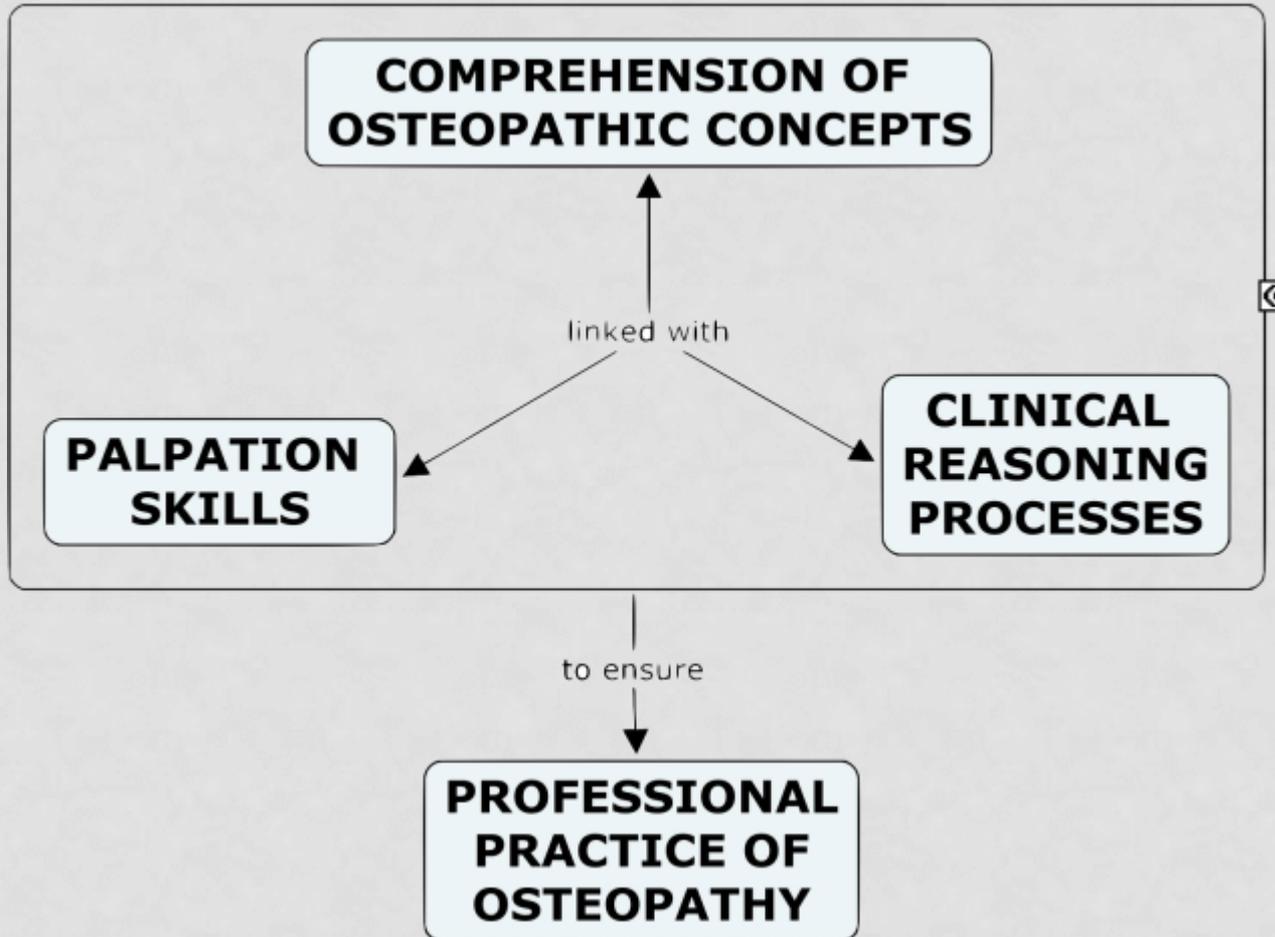
2. GUIDELINES

Patient-centered approach



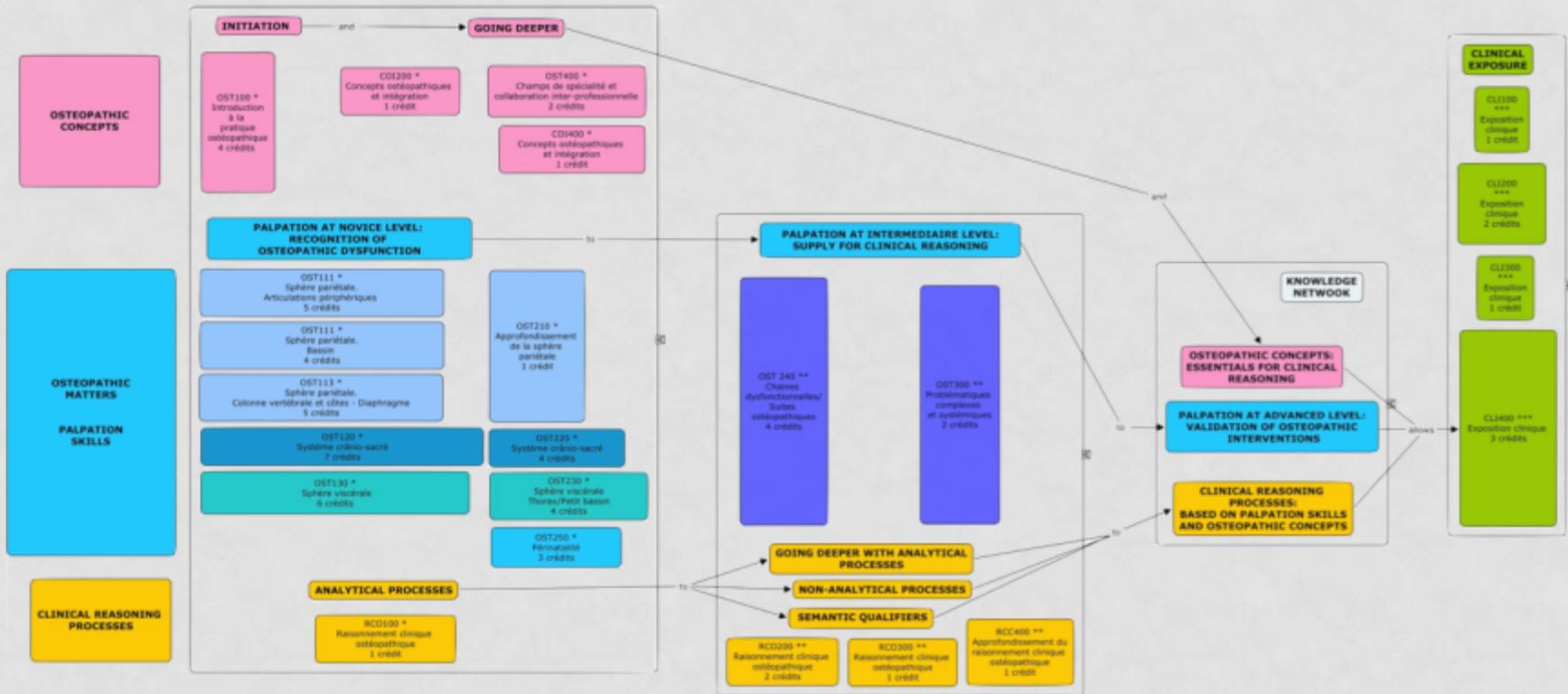
2. GUIDELINES

Deep learning and knowledge organization



2. GUIDELINES

Deep learning



2. GUIDELINES

Deep learning and reflective thinking

- Reflection and critical reflection correspond to the use of a deep learning approach with increasing levels while leveraging personal meaning to facilitate assimilation
- Strong relationship between approaches to learning and reflection stages upon practice¹

2. GUIDELINES

Deep learning of... osteopathic concepts

Osteopathic concepts must be based on explicit definitions that faculty members agreed on and share¹:

1. Patient-centered care medicine
2. Definition of osteopathic scope of practice linked with health and sickness concepts: continuum between prevention-function-structure-urgent or nonurgent medical conditions
3. Definition of osteopathic dysfunctions (ART or TART or START including their pathophysiology;
4. Identification of reasons for consultation span;
5. Theoretical bases of osteopathic tests and techniques;
6. Prioritization of dysfunctions highlighted by evaluation;
7. Osteopathic link concept;
8. Usage of specific vocabulary for semantic transformation of reasons for consultation

2. GUIDELINES

Deep learning of ... palpation

- Development of palpation skills in the three osteopathic fields (musculoskeletal, craniosacral, visceral) by using a systematic method that relies on well-known pedagogical approaches and neuroscience data¹
- Linked with clinical reasoning processes
- Progression between:
 - **Novice level**: Recognition of osteopathic dysfunctions
 - **Intermediate level**: Development of clinical reasoning processes
 - **Advanced level**: Validation of osteopathic interventions
- Clear vision of what is an expert palpation^{2,3}

¹Aubin & al., 2014; ²Comeaux, 2005; ³Liem, 2014

2. GUIDELINES

Deep learning of... clinical reasoning

- Growth of clinical reasoning skills through a deliberate practice that is justified by research^{1, 2b, 3} and takes also into account:
 - Doubt management⁴
 - Recognition of biases^{5,6}
 - Identification and resolution of ethical dilemmas
- Creation of clinical cases repository to support non-analytical processes
- Usage of semantic qualifiers⁶
- Specific support for students⁷

¹Croskerry, 2009b; ²Audétat & al., 2012b; ³Bowen, 2006; ⁴Luther & Crandall, 2011;

⁵Croskerry, 2009a; ⁶Dror, 2011; ⁶Bordage, 2007; ⁷Audétat & al., 2012a

2. GUIDELINES

Deep learning

- Student-centered pedagogical means:
 - Problem-based learning (PBL)
 - Clinical reasoning deepening (ARC) (developed at the Université de Sherbrooke)¹
 - Clinical ability development and palpation skills
 - Concept mapping²
 - Portfolio
 - Role playing
 - Etc.

¹Chamberland, 1998; ²Hay & al., 2008

2. GUIDELINES

Deep learning

- Evaluative methods, for examples:
 - Oral assessment of clinical reasoning¹
 - Usage of scripts²
 - Written case-based in line with PBL approach³
 - Etc.
- « ...making errors and struggling, rather than being simply discouraging, should also be viewed as important opportunities for learning »⁴

¹Orrock, 2014; ²Charlin,1998; ³Anderson & al., 2008; ⁴Bjork & al., 2013

2. GUIDELINES

- Teachers must be supported by:
 - Collaborative teaching to promote students deep learning and knowledge organization
 - Specific clinical teaching methods, namely role modeling and clinical supervision¹
- Students must be supported by:
 - Systematic remediation plans to diagnose their learning and clinical reasoning problems²

¹Chamberland, 2005; Audétat & al., 2012b

2. GUIDELINES

Scientific contribution to the osteopathic field

- The program will target the development of scientific knowledge and the integration of evidence-based medicine in everyday practice by including them in clinical reasoning processes.
- By insisting on single case productions, the curriculum will allow students to rationally contribute to research and the development of the osteopathic profession.

3. POST-LEGISLATIVE PERSPECTIVES...

- Interprofessional collaboration with other healthcare professionals
- Development of specialty fields: pediatrics, obstetrics, sport medicine, gnathology, geriatrics
- Promotion of the profession

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QUESTIONS AND COMMENTS



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