Fundamentals of Medicine and Dentistry: Overview and Update

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Evolution of McGill curricula

• 1900: Each basic science subject taught in isolation, as a self-contained course.
• 1994: A ‘systems’ approach to better integrate the disconnected teaching of the basic sciences: the Unit structure that forms the current *Basis of Medicine* (BOM).
• 2005: Introduction of *Physicianship* (the physician as both healer and professional).
• 2010: Faculty Strategic Plan.
  – Education Design Group: “Outline of a Strategic Plan for a Revised McGill Medical Undergraduate Curriculum” (Eidelman, Orlowski, Pickering)
If it isn’t broken, why fix it?

**Deficiencies in our current curriculum identified by the Education Design Group (2010):**

- **Meeting societal needs**
  - Shortage of family medicine physicians
  - Graduates not well grounded in public health and cultural, legal, ethical and organizational aspects of the practice of medicine.

- **Defining the limits of what we teach**
  - What does every doctor need to know?

- **Promoting scholarship and critical thinking**

- **Meeting accreditation standards**
  - Insufficient promotion of independent learning
  - Inadequate central overview of the curriculum

- **The BOM/Physicianship disconnect**
FMD Steering Committee

*Colin Chalk (chair)
*Don Boudreau (Clinical Method)
Marie Dagenais (Dentistry)
Elaine Davis (Anatomy)
Jennifer Fitzpatrick (Genetics)
Terry Hebert (Pharmacology)
*Peter McLeod (Centre for Medical Education)
René Michel (Pathology)
David Ragsdale (BOM Unit 1 chair - Cellular Biology)
Adrian Costescu (medical student)
*Matt Walker (BOM Unit 2 chair)
Our province clearly believes that medical schools provide a societal benefit, as evidenced by the fact that they subsidize 90% of the education costs. We know from the Global Burden of Disease study (Murray & Lopez, 1996), that more than 80% of the disease burden in Canada comes from chronic diseases, and we also know that patients with chronic diseases benefit from primary care physicians. The studies of Starfield and colleagues have demonstrated the population health benefit of primary care physicians, a benefit that has not been demonstrated for specialist physicians (Starfield, Shi & Macinko, 2005). Those who work in clinical care in McGill teaching hospitals are faced daily with the difficulties of dealing with patients who don’t have a family doctor. However, McGill has the smallest percentage of students choosing family medicine as a career of all 17 medical schools in Canada. Although specialist physicians and medical research clearly contribute to societal needs, an appropriate balance needs to be found, with more of our graduates choosing family medicine.

(Eidelman, Orlowski, Pickering 2010)
Raising the profile of FM

More FP teaching, especially early.
Provide regular, early exposure to real-life FM and FPs: the *Longitudinal Family Medicine Program*.

LFMP will be:
- biweekly, starting in Sept of 1st year
- explicitly linked to classroom teaching
- evaluated
Aims of science teaching for medical/dental students

• Establish a scientific foundation for medical practice (facts + a way of thinking).
  Challenges:
  • Information overload
  • Authentic application

• Promote scholarship and critical inquiry
• Promote/model the clinician-scientist
What should every doctor know?

• The human body reacts to an infinite number of insults in a finite number of ways. By identifying all of these ways, the domain of medical knowledge can be defined in a comprehensive manner. (paraphrased from Mandin 2003)

• MCC Clinical Presentations (120) attempt to capture all the reasons patients visit doctors.

• UGME should equip every graduate with the knowledge and skills to handle these CP’s. [Furthermore, the MCC qualifying examinations will test if they can…]

• Thus the MCC CP’s form a rationale framework to determine what we should include/exclude in our curriculum.
The problem of detail

• A concrete example from BOM Unit 6: Eye Movements
  • A vast and fascinating area of neuroanatomy and neurophysiology in which we happen to have considerable local expertise.
  • Local expert produced an admirably focused 1-hour presentation on eye movement systems (& 20 pages of notes!)
  • Illuminating for the Unit chair and a few students, but for most, overwhelming and thus forgotten (or ignored).

• Instead, consider things from the MCC CP perspective. Students must understand enough about eye movements to deal with patients presenting with “diplopia”, “coma”, and “dizziness/vertigo”.
  • Anatomy and physiology will be less detailed (easier), but more selective (the challenge).

• McLeod’s goalposts: Must know/Should know/Nice to know.
### Overview of FMD

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1. Introduce a broader view of medical practice.
2. Teach normal + abnormal in each block.
3. Make explicit connections between classroom and clinic learning from day 1.
FMD Block Leaders

Molecules to Global Health: Anne Andermann
Respiration: *Sal Qureshi
Circulation: *Matt Walker
Digestion & Metabolism: Chris Zalai
Homeostasis: *Tiina Podymow
Defense: Christine McCusker
Infection: Chris Karatzios
Movement: Kathryn Sun
Reproduction & Sexuality: Bill Buckett
Human Behaviour: *Fraser Moore