November 2016 Articles you may enjoy (abstracts and links)

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1. **CanMEDs is a Theory**
2. **Using the Doctoring Course to Promote Integration**
3. **Difficulty and Discriminative Ability of Core Versus Supplementary Questions—Can We Test for Competency and Excellence Simultaneously?**
4. **Working memory, reasoning, and expertise in medicine—insights into their relationship using functional neuroimaging (**Bruce Wright is one of the authors). The entire issue focuses on neuroscience in health professions education and learning
5. **Attending Rounds: What do the all-star teachers do**
6. **The simulated clinical environment: cognitive and emotional impact among undergraduates**
7. **Game Theory and Strategy in Medical Education** and the commentary:
   (**The feedback Game: Missed Opportunities in Workplace-Based Education**)
8. **More productive ways to think about learning, knowledge and education**
9. **A peer-reviewed collection of short reports from around the world on innovative approaches to medical education** (A series of short (1 page max) reports on innovations and what was learned. Good to look at, not just for the topics, but for ideas on how to submit your innovations for publication without needing to write a long article.)
10. **Is Canada Ready for Nationwide Collaboration on Medical School Admissions Practices and Policies?**

1.**CanMEDS is a Theory**
Ellaway, Rachel
Advances in Health Sciences Education, Theory and Practice First Online: 17 November 2016DOI: 10.1007/s10459-016-9724-3

This is an editorial, so no abstract.

http://link.springer.com.ezproxy.library.uvic.ca/article/10.1007/s10459-016-9724-3

http://link.springer.com.ezproxy.library.ubc.ca/article/10.1007/s10459-016-9724-3

2.**Using the Doctoring Course to Promote Integration**
Joyce, B., Afonso, N. & Achike, F.
Medical Science Educator. December 2016, Volume 26, issue 4, pp 529–532

Abstract:
Background Despite calls for reform, the integrated curriculum in the preclinical years has been challenging to develop and difficult to implement.

Activity
This manuscript describes the approaches taken by the doctoring courses of two new medical schools to help students understand basic sciences in clinical context.

Challenges, Lessons Learned, and Future Directions
Adequate resources to permit synchronous presentation of curriculum are necessary. The development of assessment tools and curricular outcomes is an area both schools are working on.

Conclusions
These two examples serve as a generic platform to utilize the doctoring course for promoting curriculum integration.

To read more:
http://link.springer.com.ezproxy.library.uvic.ca/article/10.1007/s40670-016-0297-9

http://link.springer.com.ezproxy.library.ubc.ca/article/10.1007/s40670-016-0297-9

3.Difficulty and Discriminative Ability of Core Versus Supplementary Questions—Can We Test for Competency and Excellence Simultaneously?
Kumar, M.K., Gulick, D., Palaszewski, D.M. et al.
Medical Science Educator. December 2016, Volume 26, issue 4, pp 547-551

 Abstract:
In theory, a competency-based medical school curriculum allows all students the prospect of answering every test question correctly. In practice, tests often include questions that may not assess core medical knowledge. A panel of five medical educators from diverse fields categorized the pre-clerkship multiple choice test questions as either core or supplemental. Core questions that were deemed essential for completion of the medical curriculum, licensing exams, or the practice of medicine were classified as core questions (C). The panel determined that the majority (85.9 %) of the questions tested essential medical knowledge (C) while a smaller percentage (14.1 %) tested material that was important but not essential to medical education, termed supplemental questions (S). Supplemental questions were found to be more difficult to answer and had a higher discriminative ability. Thus, these questions better differentiated strong performers from weak performers. This suggests that while core question performance measures whether students have met levels of basic knowledge competency, inclusion of supplemental questions may allow us to recognize academic excellence.

To read more:
http://link.springer.com.ezproxy.library.uvic.ca/article/10.1007/s40670-016-0329-5

http://link.springer.com.ezproxy.library.ubc.ca/article/10.1007/s40670-016-0329-5

4. Working memory, reasoning, and expertise in medicine—insights into their relationship using functional neuroimaging
Hruska, P., Krigolson, O., Coderre, S. et al. (including Bruce Wright)
Advances in Health Sciences Education, Theory and Practice December 2016 Vol 21, (5), 935–952

Abstract:

Clinical reasoning is dependent upon working memory (WM). More precisely, during the clinical reasoning process stored information within long-term memory is brought into WM to facilitate the internal deliberation that affords a clinician the ability to reason through a case. In the present study, we examined the relationship between clinical reasoning and WM while participants read clinical cases with functional magnetic resonance imaging (fMRI). More specifically, we examined the impact of clinical case difficulty (easy, hard) and clinician level of expertise (2nd year medical students, senior gastroenterologists) on neural activity within regions of cortex associated with WM (i.e., the prefrontal cortex) during the reasoning process. fMRI was used to scan ten second-year medical students and ten practicing gastroenterologists while they reasoned through sixteen clinical cases [eight straight forward (easy) and eight complex (hard)] during a single 1-h scanning session. Within-group analyses contrasted the easy and hard cases which were then subsequently utilized for a between-group analysis to examine effects of expertise (novice > expert, expert > novice). Reading clinical cases evoked multiple neural activations in occipital, prefrontal, parietal, and temporal cortical regions in both groups. Importantly, increased activation in the prefrontal cortex in novices for both easy and hard clinical cases suggests novices utilize WM more so than experts during clinical reasoning. We found that clinician level of expertise elicited differential activation of regions of the human prefrontal cortex associated with WM during clinical reasoning. This suggests there is an important relationship between clinical reasoning and human WM. As such, we suggest future models of clinical reasoning take into account that the use of WM is not consistent throughout all clinical reasoning tasks, and that memory structure may be utilized differently based on level of expertise.

To read more:

http://link.springer.com.ezproxy.library.uvic.ca/article/10.1007/s10459-015-9649-2

http://link.springer.com.ezproxy.library.ubc.ca/article/10.1007/s10459-015-9649-2

5.Attending Rounds: What do the all-star teachers do
Frank w. Merritt, Melissa N. Noble et al
Medical Teacher Published online November 12, 2016

Abstract:

Aim: To examine differences in the types of teaching activities performed during rounds between the most effective and least effective inpatient teaching attendings.

Methods: Participants included 56 attending physicians supervising 279 trainees. Trained observers accompanied teams during rounds and recorded the frequencies of educational activities that occurred. Students and residents then rated their satisfaction with the teaching on rounds.

Results: Attending physicians with the highest learner satisfaction scores performed significantly more teaching activities per patient than attending physicians who were rated as average or less-effective (2.1 vs. 1.4 vs. 1.5; p = .03). There were significant differences in the frequencies of 3 out of the 9 specific teaching activities observed, including answering specific patient-care related questions (77% vs. 66% vs.

47%; p = .003), teaching on learner chosen topics (8% vs. 2% vs. 2%; p = .02), and providing feedback (31% vs. 10% vs. 0.1%; p = .001).

Conclusions: Specific categories of teaching activities—patient-specific teaching, teaching on learner-identified topics, and providing real-time feedback—are performed more frequently by the highest-rated attending physicians, which can guide faculty development.

To read more:

http://www-tandfonline-com.ezproxy.library.uvic.ca/doi/full/10.1080/0142159X.2017.1248914

http://www-tandfonline-com.ezproxy.library.ubc.ca/doi/full/10.1080/0142159X.2017.1248914

6.The simulated clinical environment: cognitive and emotional impact among undergraduates
  Marie-Lawrence Tremblay, Alexandre Lafleur et al
  Medical Teacher Published online November 10, 2016

Abtract:

Context: Simulated clinical immersion (SCI) is used in undergraduate healthcare programs to expose the learner to real-life situations in authentic simulated clinical environments. For novices, the environment in which the simulation occurs can be distracting and stressful, hence potentially compromising learning.

Objectives: This study aims to determine whether SCI (with environment) imposes greater extraneous cognitive load and stress on undergraduate pharmacy students than simulated patients (SP) (without environment). It also aims to explore how features of the simulated environment influence students' perception of learning.

Methods: In this mixed-methods study, 143 undergraduate pharmacy students experienced both SCI and SP in a crossover design. After the simulations, participants rated their cognitive load and emotions. Thirty-five students met in focus groups to explore their perception of learning in simulation.

Results: Intrinsic and extraneous cognitive load and stress scores in SCI were significantly but modestly higher compared to SP. Qualitative findings reveal that the physical environment in SCI generated more stress and affected students? focus. In SP, students concentrated on clinical reasoning. SCI stimulated a focus on data collection but impeded in-depth problem solving processes.

Conclusion: The physical environment in simulation influences what and how students learn. SCI was reported as more cognitively demanding than SP. Our findings emphasize the need for the development of adapted instructional design guidelines in simulation for novices.

To read more:

http://www-tandfonline-com.ezproxy.library.uvic.ca/doi/full/10.1080/0142159X.2016.1246710

http://www-tandfonline-com.ezproxy.library.ubc.ca/doi/full/10.1080/0142159X.2016.1246710

7.Game Theory and Strategy in Medical Education
  Amy Blake and Bryan T Carroll

Abstract:

Objective
This paper analyses how game theory can provide a framework for understanding the strategic decision-making that occurs in everyday scenarios in medical training and practice, and ultimately serves as a tool for improving the work environment and patient care. Game theory has been applied to a variety of fields outside of its native economics, but has not been thoroughly studied in the context of health care provision.

Methods
The paper discusses four of the most common 'games' and applies each to a scenario in medicine to provide new insight on the incentives and drivers for certain types of behaviour and a deeper understanding of why certain results are valued more strongly than others.

Conclusions
Using game theory as an integrative tool, in conjunction with good judgement and a sound knowledge base, trainees and physicians can work to better recognise where competing priorities exist, understand the motivations and interactions of the various players, and learn to adjust their approaches in order to 'change the game' when their preferred outcome is not the most likely one.

To read more:

http://onlinelibrary.wiley.com.ezproxy.library.uvic.ca/wol1/doi/10.1111/medu.13116/full

http://onlinelibrary.wiley.com.ezproxy.library.ubc.ca/wol1/doi/10.1111/medu.13116/full

And the commentary (no abstract):

The feedback game: missed opportunities in workplace-based learning

http://onlinelibrary.wiley.com.ezproxy.library.uvic.ca/doi/10.1111/medu.13161/full

http://onlinelibrary.wiley.com.ezproxy.library.ubc.ca/doi/10.1111/medu.13161/full

8.More productive ways to think about learning, knowledge and education
  Angus McMurtry and Robert McMurtry

This is a short commentary (no abstract)

http://onlinelibrary.wiley.com.ezproxy.library.uvic.ca/wol1/doi/10.1111/medu.13070/full

http://onlinelibrary.wiley.com.ezproxy.library.ubc.ca/wol1/doi/10.1111/medu.13070/full

9.A peer-reviewed collection of short reports from around the world on innovative approaches to medical education
Medical Education Volume 50, issue 11, November 2016 pp. 1143-1172

(A series of short (1 page max) reports on innovations and what was learned. Good to look at, not just for the topics, but for ideas on how to submit your innovations for publication without needing to write a long article.)

Topics:

Medical Student Education

Personal and Professional Development
License to commence clinical day: The L-Plate test
The hospital mortuary: learning about death…and life
Teaching medical law and ethics using letter-based narrative
BROWnies: bioethics rounds on the wards
Healing conversations in medicine: Making Every Encounter Therapeutic
Shared team leadership training through pre-clerkship team-based learning
Facilitating guided reflections on leadership activities
A national collaboration to improve OSCE delivery

Professionalism and Interprofessionalism
Implementing an "Interprofessional fair" for pre-clinical medical undergraduates
South American investigation on professionalism: a theoretical framework
Boosters for clerkship professionalism curriculum: online self-learning modules
Students as teachers
A near-peer talk to allay Year 1 Student anxieties and misconceptions over assessments
Teaching is the best way to learn: student-led screencasting
Student-as-teacher: the creation of a medical student-driven education elective
Basic life support: students teaching community health workers
Resident grand rounds

Postgraduate Education

Health care disparities education using the implicit association test
Changing the culture of the morbidity and mortality conference
Art and movement in nutrition education
Revising residents' addiction experience: a 1-week intensive course

Simulation and Technology Applications

Using high-fidelity simulation for critical event training
A novel approach to virtual patient simulation using natural language processing
Digital interactive learning during idle time at work
Novel mobile application to improve student feedback
Use of WhatsApp in assisting psychiatry learning
Computer dissection program to enhance understanding of ultrasound anatomy
A quick and easy makeshift suture pad

Faculty Development

SBAR: Towards a common interprofessional team-based communication tool
Identifying teaching award criteria for health professional educators
Implementation of point-of-care tools for assessment of teaching
Scientific speaker apprenticeship program
Using critical friends to build writing success
Getting SMART about teaching objective writing

10.**Is Canada Ready for Nationwide Collaboration on Medical School Admissions Practices and Policies?**
Hanson, Mark D.; Moineau, Geneviève MD et al
Academic Medicine Volume 91(11), November 2016, p 1501–1508

Abstract:

The report by the Association of Faculties of Medicine of Canada (AFMC) entitled "The Future of Medical Education in Canada: A Collective Vision for MD Education" includes recommendations to enhance admissions processes and increase national collaboration. To achieve these goals, the AFMC conducted a nationwide environmental scan appraising medical schools' readiness for national collaboration and progress toward establishing "made-in-Canada" admissions processes. A critical narrative review of the academic and gray literature was conducted as part of this environmental scan. Four core admissions practice and policy domains were identified: (1) social accountability strategies, (2) standardized admissions testing, (3) interviewing procedures, and (4) application procedures.

In this article, the authors summarize and discuss the findings of this narrative review with regard to the four domains. They provide documentation of historical and present-day admissions factors relevant to Canadian medical schools' readiness for nationwide collaboration and a descriptive analysis of the facilitators and barriers to establishing "made-in-Canada" admissions processes.

All four domains had facilitators and barriers. One barrier, however, cut across multiple domains—medical schools' pursuit of prestige and its potential to conflict with the goals of the other domains. The authors recommend holding a national forum to debate these issues and to advance the AFMC's goals, a process that will not be straightforward. Yet, national collaboration holds promise for applicants, medical schools, and Canada's diverse population of patients, so efforts toward this end must continue.

To read more:

http://ovidsp.tx.ovid.com.ezproxy.library.uvic.ca/sp-3.22.1b/ovidweb.cgi?&S=GHILFPPKEIDDAMLFNCHKDCJCDELFAA00&Link+Set=S.sh.31.32.36.46%7c17%7csl_10

http://ovidsp.tx.ovid.com.ezproxy.library.ubc.ca/sp-3.22.1b/ovidweb.cgi?&S=GHILFPPKEIDDAMLFNCHKDCJCDELFAA00&Link+Set=S.sh.31.32.36.46%7c17%7csl_10