**October, 2013 PubMed DOCS Journal Watch**

1. Med Teach. 2013 Oct;35(10):847-57. doi: 10.3109/0142159X.2013.804909. Epub 2013

Jul 10.

**The use of social-networking sites in medical education.**

Cartledge P, Miller M, Phillips B.

Yorkshire School of Paediatrics , UK.

Background: A social-network site is a dedicated website or application which

enables users to communicate with each other and share information, comments,

messages, videos and images. Aims: This review aimed to ascertain if

"social-networking sites have been used successfully in medical education to

deliver educational material", and whether "healthcare professionals, and

students, are engaging with social-networking sites for educational purposes".

Method: A systematic-review was undertaken using the PRISMA (Preferred Reporting

Items for Systematic Reviews and Meta-Analyses) guidelines. Eight databases were

searched with pre-defined search terms, limits and inclusion criteria. Data was

extracted into a piloted data-table prior to the narrative-synthesis of the

Quality, Utility, Extent, Strength, Target and Setting of the evidence. Results:

1047 articles were identified. Nine articles were reviewed with the majority

assessing learner satisfaction. Higher outcome measures were rarely investigated.

Educators used Facebook, Twitter, and a custom-made website, MedicineAfrica to

achieve their objectives. Conclusions: Social-networking sites have been employed

without problems of professionalism, and received positive feedback from

learners. However, there is no solid evidence base within the literature that

social-networking is equally or more effective than other media available for

educational purposes.

PMID: 23841681 [PubMed - in process]

2. Med Teach. 2013 Oct;35(10):826-31. doi: 10.3109/0142159X.2013.802301. Epub 2013

Jul 5.

**"I have the right to a private life": Medical students' views about**

**professionalism in a digital world.**

Ross S, Lai K, Walton JM, Kirwan P, White JS.

University of Alberta , Canada.

Background: Social media site use is ubiquitous, particularly Facebook. Postings

on social media can have an impact on the perceived professionalism of students

and practitioners. Aims: In this study, we explored the attitudes and

understanding of undergraduate medical students towards professionalism, with a

specific focus on online behaviour. Methods: A volunteer sample of students

(n = 236) responded to an online survey about understanding of professionalism

and perceptions of professionalism in online environments. Respondents were

encouraged to provide free text examples and to elaborate on their responses

through free text comments. Descriptive analyzes and emergent themes analysis

were carried out. Results: Respondents were nearly unanimous on most questions of

professionalism in the workplace, while 43% felt that students should act

professionally at all times (including free time). Sixty-four free text comments

revealed three themes: "free time is private time";" professionalism is

unrealistic as a way of life"; and "professionalism should be a way of life".

Conclusions: Our findings indicate a disconnect between what students report of

what they understand of professionalism, and what students feel is appropriate

and inappropriate in both online and real life behaviour. Curriculum needs to

target understanding of professionalism in online and real environments and

communicate realistic expectations for students.

PMID: 23826730 [PubMed - in process]

3. Med Teach. 2013 Oct;35(10):838-46. doi: 10.3109/0142159X.2013.804910. Epub 2013

Jun 28.

**Difficulty giving feedback on underperformance undermines the educational value**

**of multi-source feedback.**

Ingram JR, Anderson EJ, Pugsley L.

Cardiff University , UK.

Background: Multi-source feedback (MSF) was intended to provide both a summative

and formative assessment of doctors' attitudes and behaviours. Aims: To explore

the influences of feedback quality and trainees' acceptance of the assessment on

formative educational gains from MSF. Methods: Semi-structured interviews were

conducted with a convenience sample of eight dermatology trainees, from an

insider researcher position, following two pilot interviews. Interviews were

manually transcribed and coded to permit template analysis, a subtype of thematic

analysis. Results: The interview data indicated that MSF provides relatively

little formative educational gains largely because of a paucity of constructive

feedback on sub-optimal performance. This was due to difficulties encountered by

raters giving developmental feedback, in particular, potential loss of anonymity,

and by trainees selecting raters expected to give favourable comments. Dual use

of MSF as a summative assessment in annual appraisals also inhibited educational

gains by promotion of a 'tick box' mentality in which trainees' need to pass

their assessment superseded their desire for self-improvement. Conclusions: A

relative lack of developmental feedback limits the formative educational gains

from MSF and could provide false reassurance that might reinforce negative

behaviours.

PMID: 23808684 [PubMed - in process]

4. Med Teach. 2013 Oct;35(10):832-7. doi: 10.3109/0142159X.2013.803062. Epub 2013

Jun 28.

**Decision-making bias in assessment: The effect of aggregating objective**

**information and anecdote.**

Tweed MJ, Thompson-Fawcett M, Wilkinson TJ.

University of Otago , New Zealand.

Introduction: Assessment decisions increasingly rely on synthesis of information

from a variety of sources. It is known that aggregation of information to make

decisions is open to a number of biases. The aim of this research was to

investigate bias, accuracy and confidence of assessment decision making. Methods:

The participants were consultation skills assessors. A model for incremental

information was developed with participants being shown results from purposefully

selected, but authentic, data from the University's final summative 10-station

Objective Structured Clinical Examination (OSCE). After each piece of

information, participants gave a pass-fail decision and their confidence in that

choice. Following the information from 10 OSCE stations the participants were

given a discordant fictional anecdote and again participants gave a pass-fail

decision and their confidence. Results: When there is overwhelming evidence to

support a pass or fail, participants were not as confident as the data would

support. Participants were less confident to make a fail decision than a pass.

Despite considerable evidence from multiple results some participants altered

decisions based on isolated contradictory information from an anecdote.

Discussion: These findings are significant in understanding decision-making.

Given equivalent levels of evidence, decision makers are less confident to fail

than pass and less robust information can undermine more robust information.

PMID: 23808651 [PubMed - in process]

5. Acad Med. 2013 Oct;88(10):1588. doi: 10.1097/ACM.0b013e3182a36cc6.

**AM Last Page: Avoiding Five Common Pitfalls of Experimental Research in Medical**

**Education.**

van Loon MH, Kok EM, Kamp RJ, Carbonell KB, Beckers J, Frambach JM, de Bruin AB.

Maastricht University.

PMID: 24064620 [PubMed - in process]

6. Med Educ. 2013 Oct;47(10):1022-8. doi: 10.1111/medu.12252.

**Medical education and moral segmentation in medical students.**

Hegazi I, Wilson I.

Department of Medical Education, University of Western Sydney, Sydney, New South

Wales, Australia.

CONTEXT: Many studies indicate that increases in cognitive ability, maturity and

educational experience lead to a general increase in moral reasoning skills.

However, research has shown that moral development does not occur during medical

school and that it may, in fact, plateau or even regress. There is no empirical

evidence as to what might be the cause of such a result.

OBJECTIVES: The present study aimed to assess moral judgement competence in

medical students and to investigate trends in moral judgement competence in

relation to age, gender, culture, religion, year of medical course and different

programmes within the medical curriculum.

METHODS: We employed a cross-sectional and descriptive design over two

consecutive years (2011 and 2012). Students completed Lind's Moral Judgement Test

(MJT), which is based on Kohlberg's stages of moral development and is used to

measure moral judgement competence (C-INDEX). C-INDEX results were analysed in

relation to age, gender, cultural background, religion, cohort and specific

programmes within the medical curriculum.

RESULTS: The numbers of students who completed the MJT in 2011 and 2012 were 394

and 486, respectively. The two studies showed a significant difference and

negative correlations between the moral judgement competence of medical students

and both age and year of medical course (p < 0.001). The findings suggested the

existence of a phenomenon known as 'moral segmentation', which increased

significantly as students progressed through medical education, and were

significantly linear between cohorts.

CONCLUSIONS: Students show a decline in moral judgement competence during medical

education. This probably reflects an increase in moral segmentation rather than

an inhibition in moral development. The challenge is to develop a curriculum that

will enable medical students to maintain, or better, increase their moral

judgement competence.

PMID: 24016172 [PubMed - in process]

7. Med Educ. 2013 Oct;47(10):979-89. doi: 10.1111/medu.12260.

**The roles of deliberate practice and innate ability in developing expertise:**

**evidence and implications.**

Kulasegaram KM, Grierson LE, Norman GR.

Programme for Educational Research and Development, Faculty of Health Sciences,

McMaster University, Hamilton, Ontario, Canada; Department of Clinical

Epidemiology and Biostatistics, Faculty of Health Sciences, McMaster University,

Hamilton, Ontario, Canada.

CONTEXT: Medical education research focuses extensively on experience and

deliberate practice (DP) as key factors in the development of expert performance.

The research on DP minimises the role of individual ability in expert

performance. This claim ignores a large body of research supporting the

importance of innate individual cognitive differences. We review the relationship

between DP and an innate individual ability, working memory (WM) capacity, to

illustrate how both DP and individual ability predict expert performance.

METHODS: This narrative review examines the relationship between DP and WM in

accounting for expert performance. Studies examining DP, WM and individual

differences were identified through a targeted search.

RESULTS: Although all studies support extensive DP as a factor in explaining

expertise, much research suggests individual cognitive differences, such as WM

capacity, predict expert performance after controlling for DP. The extent to

which this occurs may be influenced by the nature of the task under study and the

cognitive processes used by experts. The importance of WM capacity is greater for

tasks that are non-routine or functionally complex. Clinical reasoning displays

evidence of this task-dependent importance of individual ability.

CONCLUSIONS: No single factor is both necessary and sufficient in explaining

expertise, and individual abilities such as WM can be important. These individual

abilities are likely to contribute to expert performance in clinical settings.

Medical education research and practice should identify the individual

differences in novices and experts that are important to clinical performance.

PMID: 24016168 [PubMed - in process

8. Acad Med. 2013 Oct;88(10):1578-85. doi: 10.1097/ACM.0b013e3182a45def.

**Cognition before curriculum: rethinking the integration of basic science and**

**clinical learning.**

Kulasegaram KM, Martimianakis MA, Mylopoulos M, Whitehead CR, Woods NN.

Mr. Kulasegaram is a PhD candidate, Clinical Epidemiology and Biostatistics

Program and Program for Education Research and Development, Faculty of Health

Sciences, McMaster University, Hamilton, Ontario, Canada. He is also a Wilson

Centre Fellow, University of Toronto, Toronto, Ontario, Canada. Dr. Martimianakis

is director of scholarship, assistant professor, Department of Paediatrics, and

scientist, Wilson Centre, Faculty of Medicine, University of Toronto, Toronto,

Ontario, Canada. Dr. Mylopoulos is assistant professor of paediatrics, University

of Toronto, scientist, Learning Institute, Sick Kids Hospital, and scientist,

Wilson Centre, Faculty of Medicine, University of Toronto, Toronto, Ontario,

Canada. Dr. Whitehead is vice chair for education, associate professor,

Department of Family and Community Medicine, scientist, Wilson Centre, and

education scientist, Centre for Ambulatory Care Education, Women's College

Hospital, Faculty of Medicine, University of Toronto, Toronto, Ontario, Canada.

Dr. Woods is assistant professor, Department of Surgery, and education scientist,

Wilson Centre, Faculty of Medicine, University of Toronto, Toronto, Ontario,

Canada.

PURPOSE: Integrating basic science and clinical concepts in the undergraduate

medical curriculum is an important challenge for medical education. The health

professions education literature includes a variety of educational strategies for

integrating basic science and clinical concepts at multiple levels of the

curriculum. To date, assessment of this literature has been limited.

METHOD: In this critical narrative review, the authors analyzed literature

published in the last 30 years (1982-2012) using a previously published

integration framework. They included studies that documented approaches to

integration at the level of programs, courses, or teaching sessions and that

aimed to improve learning outcomes. The authors evaluated these studies for

evidence of successful integration and to identify factors that contribute to

integration.

RESULTS: Several strategies at the program and course level are well described

but poorly evaluated. Multiple factors contribute to successful learning, so

identifying how interventions at these levels result in successful integration is

difficult. Evidence from session-level interventions and experimental studies

suggests that integration can be achieved if learning interventions attempt to

link basic and clinical science in a causal relationship. These interventions

attend to how learners connect different domains of knowledge and suggest that

successful integration requires learners to build cognitive associations between

basic and clinical science.

CONCLUSIONS: One way of understanding the integration of basic and clinical

science is as a cognitive activity occurring within learners. This perspective

suggests that learner-centered, content-focused, and session-level-oriented

strategies can achieve cognitive integration.

PMID: 23969375 [PubMed - in process]

9. Acad Med. 2013 Oct;88(10):1564-9. doi: 10.1097/ACM.0b013e3182a36bb5.

**Educating future physicians to track health care quality: feasibility and**

**perceived impact of a health care quality report card for medical students.**

O'Neill SM, Henschen BL, Unger ED, Jansson PS, Unti K, Bortoletto P, Gleason KM,

Woods DM, Evans DB.

Dr. O'Neill is an MD candidate, Feinberg School of Medicine, Northwestern

University, Chicago, Illinois. Dr. Henschen is an internal medicine resident,

Department of Medicine, Northwestern McGaw Medical Center, Northwestern

University, Chicago, Illinois. Dr. Unger is an internal medicine resident,

Department of Medicine, Northwestern McGaw Medical Center, Northwestern

University, Chicago, Illinois. Mr. Jansson is an MD candidate, Feinberg School of

Medicine, Northwestern University, Chicago, Illinois. Ms. Unti is an MD

candidate, Feinberg School of Medicine, Northwestern University, Chicago,

Illinois. Mr. Bortoletto is an MD candidate, Feinberg School of Medicine,

Northwestern University, Chicago, Illinois. Ms. Gleason is clinical quality

leader, Clinical Quality Department, Northwestern Memorial Hospital, Chicago,

Illinois. Dr. Woods is research associate professor, Center for Healthcare

Studies-Institute for Public Health and Medicine, Northwestern University,

Chicago, Illinois. Dr. Evans is assistant professor, Division of General Internal

Medicine, Northwestern Medical Faculty Foundation, Northwestern University,

Chicago, Illinois.

PURPOSE: Quality improvement (QI) requires measurement, but medical schools

rarely provide opportunities for students to measure their patient outcomes. The

authors tested the feasibility and perceived impact of a quality metric report

card as part of an Education-Centered Medical Home longitudinal curriculum.

METHOD: Student teams were embedded into faculty practices and assigned a panel

of patients to follow longitudinally. Students performed retrospective chart

reviews and reported deidentified data on 30 nationally endorsed QI metrics for

their assigned patients. Scorecards were created for each clinic team. Students

completed pre/post surveys on self-perceived QI skills.

RESULTS: A total of 405 of their patients' charts were abstracted by 149 students

(76% response rate; mean 2.7 charts/student). Median abstraction time was 21.8

(range: 13.1-37.1) minutes. Abstracted data confirmed that the students had

successfully recruited a "high-risk" patient panel. Initial performance on

abstracted quality measures ranged from 100% adherence on the use of

beta-blockers in postmyocardial infarction patients to 24% on documentation of

dilated diabetic eye exams. After the chart abstraction assignment, grand rounds,

and background readings, student self-assessment of their perceived QI skills

significantly increased for all metrics, though it remained low.

CONCLUSIONS: Creation of an actionable health care quality report card as part of

an ambulatory longitudinal experience is feasible, and it improves student

perception of QI skills. Future research will aim to use statistical process

control methods to track health care quality prospectively as our students use

their scorecards to drive clinic-level improvement efforts.

PMID: 23969369 [PubMed - in process]

10. Acad Med. 2013 Oct;88(10):1418-23. doi: 10.1097/ACM.0b013e3182a36a07.

**Just imagine: new paradigms for medical education.**

Mehta NB, Hull AL, Young JB, Stoller JK.

Dr. Mehta is associate professor of medicine and director of education

technology, Cleveland Clinic Lerner College of Medicine of Case Western Reserve

University, Cleveland, Ohio. Dr. Hull is professor of medicine and associate dean

for curricular affairs, Cleveland Clinic Lerner College of Medicine of Case

Western Reserve University, Cleveland, Ohio. Dr. Young is professor of medicine

and executive dean, Cleveland Clinic Lerner College of Medicine of Case Western

Reserve University, Cleveland, Ohio. Dr. Stoller is Jean Wall Bennett Professor

of Medicine and Chairman, Education Institute, Cleveland Clinic, Cleveland, Ohio.

For all its traditional successes, the current model of medical education in the

United States and Canada is being challenged on issues of quality, throughput,

and cost, a process that has exposed numerous shortcomings in its efforts to meet

the needs of the nations' health care systems. A radical change in direction is

required because the current path will not lead to a solution.The 2010

publication Educating Physicians: A Call for Reform of Medical School and

Residency identifies several goals for improving the medical education system,

and proposals have been made to reform medical education to meet these goals.

Enacting these recommendations practically and efficiently, while training more

health care providers at a lower cost, is challenging.To advance solutions, the

authors review innovations that are disrupting higher education and describe a

vision for using these to create a new model for competency-based,

learner-centered medical education that can better meet the needs of the health

care system while adhering to the spirit of the above proposals. These

innovations include collaboration amongst medical schools to develop massive open

online courses for didactic content; faculty working in small groups to leverage

this online content in a "flipped-classroom" model; and digital badges for

credentialing entrustable professional activities over the continuum of learning.

PMID: 23969368 [PubMed - in process]

11. Acad Med. 2013 Oct;88(10):1407-10. doi: 10.1097/ACM.0b013e3182a368bd.

**Medical education reimagined: a call to action.**

Prober CG, Khan S.

Dr. Prober is senior associate dean for medical education and professor of

pediatrics, microbiology, and immunology, Stanford School of Medicine, Stanford,

California. Mr. Khan is founder and executive director, Khan Academy, Mountain

View, California.

The authors propose a new model for medical education based on the "flipped

classroom" design. In this model, students would access brief (~10 minute) online

videos to learn new concepts on their own time. The content could be viewed by

the students as many times as necessary to master the knowledge in preparation

for classroom time facilitated by expert faculty leading dynamic, interactive

sessions where students can apply their newly mastered knowledge.The authors

argue that the modern digitally empowered learner, the unremitting expansion of

biomedical knowledge, and the increasing specialization within the practice of

medicine drive the need to reimagine medical education. The changes that they

propose emphasize the need to define a core curriculum that can meet learners

where they are in a digitally oriented world, enhance the relevance and retention

of knowledge through rich interactive exercises, and facilitate in-depth learning

fueled by individual students' aptitude and passion. The creation and adoption of

this model would be meaningfully enhanced by cooperative efforts across medical

schools.

PMID: 23969367 [PubMed - in process]

12. Acad Med. 2013 Oct;88(10):1552-7. doi: 10.1097/ACM.0b013e3182a34b1e.

**Validity evidence for a patient note scoring rubric based on the new patient note**

**format of the United States medical licensing examination.**

Park YS, Lineberry M, Hyderi A, Bordage G, Riddle J, Yudkowsky R.

Dr. Park is assistant professor, Department of Medical Education, University of

Illinois at Chicago College of Medicine, Chicago, Illinois. Dr. Lineberry is

assistant professor, Department of Medical Education, University of Illinois at

Chicago College of Medicine, Chicago, Illinois. Dr. Hyderi is associate dean for

curriculum and associate professor, Department of Family Medicine, University of

Illinois at Chicago College of Medicine, Chicago, Illinois. Dr. Bordage is

professor, Department of Medical Education, University of Illinois at Chicago

College of Medicine, Chicago, Illinois. Dr. Riddle is director of faculty

development and research assistant professor, Department of Medical Education,

University of Illinois at Chicago College of Medicine, Chicago, Illinois. Dr.

Yudkowsky is director, Graham Clinical Performance Center, and associate

professor, Department of Medical Education, University of Illinois at Chicago

College of Medicine, Chicago, Illinois.

PURPOSE: This study examines validity evidence for the Patient Note Scoring

Rubric, which was developed for a local graduation competency exam (GCE) to

assess patient notes written in the new United States Medical Licensing

Examination (USMLE) Step 2 Clinical Skills format. The rubric was designed to

measure three dimensions: Documentation, justified differential diagnosis (DDX),

and Workup.

METHOD: Analyses used GCE data from 170 fourth-year medical students who

completed five standardized patient (SP) cases in May 2012. Five physician raters

each scored all responses for one case. Internal structure was examined using

correlations between dimensions and between cases; a generalizability study was

also conducted. Relationship to other variables was examined by correlating

patient note scores with SP encounter scores. Consequence was assessed by

comparing pass-fail rates between the rubric and the previous global rating.

Response process was examined using rater feedback.

RESULTS: Correlations between scores from different dimensions ranged between

0.33 and 0.44. Reliability of scores based on the phi coefficient was 0.43; 15

cases were required to reach a phi coefficient of 0.70. Evidence of case

specificity was found. Documentation scores were moderately correlated with SP

scores for data gathering (r = 0.47, P < .001). There was no meaningful change in

pass-fail rates. Raters' feedback indicated that they required more training for

scoring the DDX and Workup dimensions.

CONCLUSIONS: There is initial validity evidence for use of this rubric to score

local clinical exams that are based on the new USMLE patient note format.

PMID: 23969362 [PubMed - in process]

13. Acad Med. 2013 Oct;88(10):1570-7. doi: 10.1097/ACM.0b013e3182a34b05.

**"I AM a Doctor": Negotiating the Discourses of Standardization and Diversity in**

**Professional Identity Construction.**

Frost HD, Regehr G.

Dr. Frost is a postdoctoral fellow, Centre for Health Education Scholarship,

Faculty of Medicine, University of British Columbia, Vancouver, British Columbia,

Canada. Dr. Regehr is professor, Department of Surgery, Faculty of Medicine,

University of British Columbia, Vancouver, British Columbia, Canada.

PURPOSE: Medical educators have expressed concern that students' professional

identities do not always align with their expectations or with professional

standards. The authors propose that, in constructing appropriate professional

identities, medical students today are affected by the competing discourses of

diversity and standardization.

METHOD: Between March and May 2012, the authors conducted a critical review of

seminal publications to highlight the discourses of diversity and standardization

in the medical education literature. They surveyed the social sciences literature

on identity construction and drew examples from medical education to demonstrate

how a social constructionist approach could inform the discussion about how

medical students' professional identities are affected by these discourses.

RESULTS: The discourse of diversity emphasizes individuality, difference, and a

plurality of possibilities and advances the notion that heterogeneity is

beneficial to medical education and to patients. In contrast, the discourse of

standardization strives for homogeneity, sameness, and a limited range of

possibilities and conveys that there is a single way to be a competent,

professional physician. Thus, these discourses are in tension, a fact that

medical educators largely have ignored. A social constructionist approach to

identity suggests that medical students resolve this tension in different ways

and construct different identities as a result.

CONCLUSIONS: To influence medical students' professional identity construction,

the authors advocate that educators seek change across the profession-faculty

must acknowledge and take advantage of the tension between the discourses of

standardization and diversity.

PMID: 23969361 [PubMed - in process]

14. Acad Med. 2013 Oct;88(10):1424-9. doi: 10.1097/ACM.0b013e3182a32fc2.

**Fostering innovation in medicine and health care: what must academic health**

**centers do?**

Dzau VJ, Yoediono Z, Ellaissi WF, Cho AH.

Dr. Dzau is chancellor for health affairs and James B. Duke Professor of

Medicine, Duke University, and president and CEO, Duke University Health System,

Durham, North Carolina. Dr. Yoediono is a writer and former special assistant to

the chancellor for health affairs, Duke University, Durham, North Carolina. Mr.

ElLaissi is special assistant to the chancellor for health affairs, Duke

University, Durham, North Carolina. Dr. Cho is assistant professor of medicine,

Duke University, and director, Innovation Development, Evaluation, and

Applications (IDEAs) Group, Duke University Health System, Durham, North

Carolina.

There is a real need for innovation in health care delivery, as well as in

medicine, to address related challenges of access, quality, and affordability

through new and creative approaches. Health care environments must foster

innovation, not just allowing it but actively encouraging it to happen anywhere

and at every level in health care and medicine-from the laboratory, to the

operating room, bedside, and clinics. This paper reviews the essential elements

and environmental factors important for health-related innovation to flourish in

academic health systems.The authors maintain that innovation must be actively

cultivated by teaching it, creating "space" for and supporting it, and providing

opportunities for its implementation. The authors seek to show the importance of

these three fundamental principles and how they can be implemented, highlighting

examples from across the country and their own institution.Health innovation

cannot be relegated to a second-class status by the urgency of day-to-day

operations, patient care, and the requirements of traditional research.

Innovation needs to be elevated to a committed endeavor and become a part of an

organization's culture, particularly in academic health centers.

PMID: 23969357 [PubMed - in process]

15. Acad Med. 2013 Oct;88(10):1442-9. doi: 10.1097/ACM.0b013e3182a325be.

**The design of a medical school social justice curriculum.**

Coria A, McKelvey TG, Charlton P, Woodworth M, Lahey T.

Ms. Coria is a medical student, Geisel School of Medicine at Dartmouth, Lebanon,

New Hampshire. Mr. McKelvey is a medical student, Geisel School of Medicine at

Dartmouth, Lebanon, New Hampshire. Mr. Charlton is a medical student, Geisel

School of Medicine at Dartmouth, Lebanon, New Hampshire. Dr. Woodworth is a

recent graduate, Geisel School of Medicine at Dartmouth, Lebanon, New Hampshire,

and internal medicine resident, Duke University Medical Center, Durham, North

Carolina. Dr. Lahey is associate professor of medicine, Geisel School of Medicine

at Dartmouth, Lebanon, New Hampshire.

The acquisition of skills to recognize and redress adverse social determinants of

disease is an important component of undergraduate medical education. In this

article, the authors justify and define "social justice curriculum" and then

describe the medical school social justice curriculum designed by the

multidisciplinary Social Justice Vertical Integration Group (SJVIG) at the Geisel

School of Medicine at Dartmouth. The SJVIG addressed five goals: (1) to define

core competencies in social justice education, (2) to identify key topics that a

social justice curriculum should cover, (3) to assess social justice curricula at

other institutions, (4) to catalog institutionally affiliated community outreach

sites at which teaching could be paired with hands-on service work, and (5) to

provide examples of the integration of social justice teaching into the core

(i.e., basic science) curriculum. The SJVIG felt a social justice curriculum

should cover the scope of health disparities, reasons to address health

disparities, and means of addressing these disparities. The group recommended

competency-based student evaluations and advocated assessing the impact of

medical students' social justice work on communities. The group identified the

use of class discussion of physicians' obligation to participate in social

justice work as an educational tool, and they emphasized the importance of a

mandatory, longitudinal, immersive, mentored community outreach practicum.

Faculty and administrators are implementing these changes as part of an overall

curriculum redesign (2012-2015). A well-designed medical school social justice

curriculum should improve student recognition and rectification of adverse social

determinants of disease.

PMID: 23969356 [PubMed - in process]

16. Acad Med. 2013 Oct;88(10):1545-51. doi: 10.1097/ACM.0b013e3182a31c1e.

**Comparing diagnostic performance and the utility of clinical vignette-based**

**assessment under testing conditions designed to encourage either automatic or**

**analytic thought.**

Ilgen JS, Bowen JL, McIntyre LA, Banh KV, Barnes D, Coates WC, Druck J, Fix ML,

Rimple D, Yarris LM, Eva KW.

Dr. Ilgen is assistant professor, Division of Emergency Medicine, University of

Washington, School of Medicine, Seattle, Washington. Dr. Bowen is professor,

Department of Medicine, Oregon Health & Science University, School of Medicine,

Portland, Oregon. Mr. McIntyre is a student, University of Washington, School of

Medicine, Seattle, Washington. Dr. Banh is assistant clinical professor,

Department of Emergency Medicine, University of California, San Francisco, School

of Medicine, Fresno, California. Dr. Barnes is assistant professor, Department of

Emergency Medicine, University of California, Davis, School of Medicine,

Sacramento, California. Dr. Coates is professor of clinical medicine, Department

of Emergency Medicine, University of California, Los Angeles, David Geffen School

of Medicine, and Los Angeles Biomedical Research Institute, Los Angeles,

California. Dr. Druck is associate professor, Department of Emergency Medicine,

University of Colorado, School of Medicine, Denver, Colorado. Dr. Fix is

assistant professor, Division of Emergency Medicine, University of Utah, School

of Medicine, Salt Lake City, Utah. Dr. Rimple is associate professor, Department

of Emergency Medicine, University of New Mexico, School of Medicine, Albuquerque,

New Mexico. Dr. Yarris is associate professor, Department of Emergency Medicine,

Oregon Health & Science University, School of Medicine, Portland, Oregon. Dr. Eva

is professor and director of education research and scholarship, Department of

Medicine, and senior scientist, Centre for Health Education Scholarship,

University of British Columbia, Vancouver, British Columbia, Canada.

PURPOSE: Although decades of research have yielded considerable insight into

physicians' clinical reasoning processes, assessing these processes remains

challenging; thus, the authors sought to compare diagnostic performance and the

utility of clinical vignette-based assessment under testing conditions designed

to encourage either automatic or analytic thought.

METHOD: This 2011-2012 multicenter randomized study of 393 clinicians (medical

students, postgraduate trainees, and faculty) measured diagnostic accuracy on

clinical vignettes under two conditions: one encouraged participants to give

their first impression (FI), and the other led participants through a directed

search (DS) for the correct diagnosis. The authors compared accuracy,

feasibility, reliability, and relation to United States Medical Licensing Exam

(USMLE) scores under each condition.

RESULTS: A 2 (instructional condition) × 2 (vignette complexity) × 3 (experience

level) analysis of variance revealed no difference in accuracy as a function of

instructional condition (F[1,379] = 2.44, P = .12), but demonstrated the expected

main effects of vignette complexity (F[1,379] = 965.2, P < .001) and experience

(F[2,379] = 39.6, P < .001). Pearson correlations revealed greater associations

between assessment scores and USMLE performance in the FI condition than in the

DS condition (P < .001). Spearman-Brown calculations consistently indicated that

alpha ≥ 0.75 could be achieved more efficiently under the FI condition relative

to the DS condition.

CONCLUSIONS: Instructions to trust one's first impres-sions result in similar

performance when compared with instructions to consider clinical information in a

systematic fashion, but have greater utility when used for the purposes of

assessment.

PMID: 23969355 [PubMed - in process]

17. Acad Med. 2013 Oct;88(10):1509-15. doi: 10.1097/ACM.0b013e3182a31893.

**Are we all on the same page? A discourse analysis of interprofessional**

**collaboration.**

Haddara W, Lingard L.

Dr. Haddara is assistant professor, Division of Critical Care Medicine and

Division of Endocrinology & Metabolism, Department of Medicine, Schulich School

of Medicine & Dentistry, Western University, London, Ontario, Canada. Dr. Lingard

is director, Centre for Education Research & Innovation, and professor,

Department of Medicine, Schulich School of Medicine & Dentistry and Faculty of

Education at Western University, London, Ontario, Canada.

PURPOSE: Interprofessional collaboration (IPC) has become a dominant idea in both

medical education and clinical care as reflected in its incorporation into

competency-based educational frameworks and hospital accreditation models. This

study examined the published literature to explore whether a shared IPC discourse

underpins these current efforts.

METHOD: Using a critical discourse analysis methodology informed by Michel

Foucault's approach, the authors analyzed an archive of 188 texts published from

1960 through 2011. The authors identified the texts through a search of PubMed

and CINAHL.

RESULTS: The authors identified two major discourses in IPC: utilitarian and

emancipatory. The utilitarian discourse is characterized by a positivist,

experimental approach to the question of whether IPC is useful in patient care

and, if so, what features best promote successful outcomes. This discourse uses

the language of "evidence" and "validity." The emancipatory discourse is

characterized by a constructivist approach concerned primarily with equalizing

power relations among health practitioners; its language includes "power" and

"dominance."

CONCLUSIONS: This study suggests that IPC is not a single, coherent idea in

medical education and health care. At least two different IPC discourses exist,

each with its own distinctive truths, objects, and language. The extent to which

educators and health care practitioners may tacitly align with one discourse or

the other may explain the tensions that have accompanied the conceptualization,

implementation, and assessment of IPC. Explicit acknowledgment of and attention

to these discourses could improve the coherence and impact of IPC efforts in

educational and clinical settings.

PMID: 23969354 [PubMed - in process]

18. Med Teach. 2013 Oct;35(10):e1511-30. doi: 10.3109/0142159X.2013.818632. Epub 2013

Aug 13.

**Simulation in healthcare education: A best evidence practical guide. AMEE Guide**

**No. 82.**

Motola I, Devine LA, Chung HS, Sullivan JE, Issenberg SB.

University of Miami Miller School of Medicine , USA.

Over the past two decades, there has been an exponential and enthusiastic

adoption of simulation in healthcare education internationally. Medicine has

learned much from professions that have established programs in simulation for

training, such as aviation, the military and space exploration. Increased demands

on training hours, limited patient encounters, and a focus on patient safety have

led to a new paradigm of education in healthcare that increasingly involves

technology and innovative ways to provide a standardized curriculum. A robust

body of literature is growing, seeking to answer the question of how best to use

simulation in healthcare education. Building on the groundwork of the Best

Evidence in Medical Education (BEME) Guide on the features of simulators that

lead to effective learning, this current Guide provides practical guidance to aid

educators in effectively using simulation for training. It is a selective review

to describe best practices and illustrative case studies. This Guide is the

second part of a two-part AMEE Guide on simulation in healthcare education. The

first Guide focuses on building a simulation program, and discusses more

operational topics such as types of simulators, simulation center structure and

set-up, fidelity management, and scenario engineering, as well as faculty

preparation. This Guide will focus on the educational principles that lead to

effective learning, and include topics such as feedback and debriefing,

deliberate practice, and curriculum integration - all central to simulation

efficacy. The important subjects of mastery learning, range of difficulty,

capturing clinical variation, and individualized learning are also examined.

Finally, we discuss approaches to team training and suggest future directions.

Each section follows a framework of background and definition, its importance to

effective use of simulation, practical points with examples, and challenges

generally encountered. Simulation-based healthcare education has great potential

for use throughout the healthcare education continuum, from undergraduate to

continuing education. It can also be used to train a variety of healthcare

providers in different disciplines from novices to experts. This Guide aims to

equip healthcare educators with the tools to use this learning modality to its

full capability.

PMID: 23941678 [PubMed - in process]

**August, 2013 Pub Med DOCS Journal Watch**

1. Med Teach. 2013 Aug;35(8):633-8. doi: 10.3109/0142159X.2013.801552. Epub 2013 Jun

19.

**Learning through work: clinical shadowing of junior doctors by first year medical**

**students.**

Iwata K, Gill D.

Academic Centre for Medical Education, UCL Medical School, Gower Street, London

WC1E 6BT, UK. kiwata@doctors.org.uk

BACKGROUND: Early clinical contact (ECC) is a key feature of undergraduate

programmes, yet they make significant demands on senior clinicians delivering it

and usually focus on patient contact.

AIMS: To explore the potential of an ECC activity oriented to work as a junior

doctor and the clinical environment, and the use of very junior doctors as

facilitators of this learning.

METHODS: For two academic years, all first year medical students at UCL Medical

School shadowed a Foundation Year (FY) doctor for a four-hour shift to experience

and understand the work of junior doctors. Feedback from students and FY doctors

was gathered and analysed.

RESULTS: The students found the FY doctors to be good near-peer tutors and

enjoyed exploring the clinical environment, but felt that the unstructured

learning environment was difficult. The FY doctors felt that learning in and

about the clinical environment was an important learning outcome for the

students, although they found supervising junior medical students in a shadowing

context difficult.

CONCLUSIONS: FY doctors are an effective and under-utilised resource in

introducing novices to the role of a medical professional in the clinical

environment; however students and FY doctors need support to maximise the

learning potential of early shadowing activities.

PMID: 23782048 [PubMed - in process]

2. Med Teach. 2013 Aug;35(8):648-54. doi: 10.3109/0142159X.2013.801553. Epub 2013

Jun 11.

**Enhancing clinical skill development through an Ambulatory Medicine Teaching**

**Programme: an evaluation study.**

Latta L, Tordoff D, Manning P, Dent J.

Otago University , New Zealand. lis.latta@otago.ac.nz

BACKGROUND: Teaching of clinical skills traditionally takes place in hospital

wards and outpatient settings. However high acuity and short hospital stays means

there are fewer suitable inpatients available for teaching; and time pressures

limit students' involvement in other settings. The Ambulatory Medicine Programme

was established to develop undergraduate medical students' clinical skills by

providing increased exposure to patients with a wide range of chronic medical

conditions, in a dedicated learning environment.

METHOD: A mixed qualitative/quantitative approach was used to evaluate the

Programme. This research focuses on staff and student perspectives of teaching

and learning in Ambulatory Medicine compared with inpatient and outpatient

settings; identifies which teaching methods are considered most effective; and

determines the transferability of learning. Patients' perspectives of being

involved in student teaching are also reported.

RESULTS: Results show that the programme has made a positive impact on students'

development of clinical skills, which are transferable to the clinical setting.

Patients enjoy being involved and find it personally satisfying.

CONCLUSIONS: The Ambulatory Medicine Programme is an effective way of developing

medical students' clinical skills by providing focussed teaching with real

patients in a dedicated learning environment.

PMID: 23758182 [PubMed - in process]

3. Teach Learn Med. 2013;25(4):392-7. doi: 10.1080/10401334.2013.830531.

**Abstracts From the Proceedings of the 2012 Annual Meeting of the Clerkship**

**Directors in Internal Medicine (CDIM).**

Fazio SB, Hoellein AR, Alexandraki I, Chheda SG.

Department of Medicine, Beth Israel Deaconess Medical Center , Harvard Medical

School , Boston , Massachusetts , USA.

The mission of Clerkship Directors in Internal Medicine (CDIM) is to promote

excellence in medical student internal medicine education. The organization

represents course directors, site directors, and program administrators. CDIM is

a member of the Alliance of Academic Internal Medicine, a consortium of 5

academically focused specialty organizations representing departments of internal

medicine and medical schools and teaching hospitals in the United States and

Canada. At Academic Internal Medicine Week 2012 in Phoenix, Arizona, CDIM held

its annual meeting at which oral abstracts and posters selected by the CDIM

Research committee were presented. In these proceedings we share with you

selected abstracts from the meeting that highlight CDIM members' innovation and

careful appraisal of the medical student experience. Three abstracts address

quality improvement and/or patient safety, including the description of a

longitudinal quality improvement curriculum, an observed structured clinical

examination to teach transitions of care, and teaching handoffs with simulation.

Additional abstracts focus on teaching students about the evolving landscape of

medicine, including education about cost-conscious care, the effect of duty hour

restrictions on the subinternship, and student readiness for the meaningful use

of electronic health records. One abstract surveys students' extracurricular

reading habits and another demonstrates the effects of postdischarge phone calls

on both patients and medical students. CDIM is pleased to present these

abstracts, which were identified as the highest quality and most relevant for

medical student educators and the readership of Teaching and Learning in

Medicine.

PMID: 24112211 [PubMed - in process]

4. Teach Learn Med. 2013;25(4):383-91. doi: 10.1080/10401334.2013.827969.

**A guide to performing pelvic speculum exams: a patient-centered approach to**

**reducing iatrogenic effects.**

Williams AA, Williams M.

Department of Family and Community Medicine , University of Maryland School of

Medicine , Baltimore , Maryland , USA.

Purpose: Current training in the United States for pelvic speculum examinations

(PSEs) has a primary focus on the physician-centered goal of visualizing the

cervix but may not inform practitioners of potential iatrogenic effects. Such

oversight leaves trainees unprepared and unskilled in preventing and addressing

adverse outcomes. This article incorporates a literature review into a

step-by-step guide to aid the teaching of PSEs. Summary: Iatrogenic effects of

PSEs may include mild discomfort, extreme pain, anxiety, psychological

(re)traumatization, and sexual pain disorders. A literature-based guide is

presented to identify patients at risk for adverse outcomes, set up the exam

room, set up the patient, perform the exam, calm distressed patients, and avoid

exam-interfering behaviors. Conclusions: Although PSEs can lead to adverse

outcomes, awareness of the iatrogenic effects allows clinicians to utilize

techniques to prevent or reduce negative effects. A method of incorporating

techniques described in this article into teaching is provided.

PMID: 24112210 [PubMed - in process]

5. Teach Learn Med. 2013;25(4):369-73. doi: 10.1080/10401334.2013.827968.

**Professional identity in medical students: pedagogical challenges to medical**

**education.**

Wilson I, Cowin LS, Johnson M, Young H.

a Medical Education , University of Western Sydney School of Medicine ,

Campbelltown , Australia.

Background: Professional identity, or how a doctor thinks of himself or herself

as a doctor, is considered to be as critical to medical education as the

acquisition of skills and knowledge relevant to patient care. Summary: This

article examines contemporary literature on the development of professional

identity within medicine. Relevant theories of identity construction are explored

and their application to medical education and pedagogical approaches to

enhancing students' professional identity are proposed. The influence of

communities of practice, role models, and narrative reflection within curricula

are examined. Conclusions: Medical education needs to be responsive to changes in

professional identity being generated from factors within medical student

experiences and within contemporary society.

PMID: 24112208 [PubMed - in process]

6. Teach Learn Med. 2013;25(4):358-65. doi: 10.1080/10401334.2013.827981.

**How to integrate the electronic health record and patient-centered communication**

**into the medical visit: a skills-based approach.**

Duke P, Frankel RM, Reis S.

Department of Medicine, Division of General Internal Medicine , Drexel

University College of Medicine , Philadelphia , Pennsylvania , USA.

Background: Implementation of the electronic health record (EHR) has changed the

dynamics of doctor-patient communication. Physicians train to use EHRs from a

technical standpoint, giving only minimal attention to integrating the human

dimensions of the doctor-patient relationship into the computer-accompanied

medical visit. Description: This article reviews the literature and proposes a

model to help clinicians, residents, and students improve physician-patient

communication while using the EHR. Evaluation: We conducted a literature search

on use of communication skills when interfacing with the EHR. We observed an

instructional gap and developed a model using evidence-based communication

skills. Conclusion: This model integrates patient-centered interview skills and

aims to empower physicians to remain patient centered while effectively using

EHRs. It may also serve as a template for future educational and practice

interventions for use of the EHR in the examination room.

PMID: 24112206 [PubMed - in process]

7. Teach Learn Med. 2013;25(4):342-7. doi: 10.1080/10401334.2013.827977.

**An integrated virtual family curriculum to introduce specialty-specific clinical**

**skills to rising third-year medical students.**

George P, Macnamara MM, Gainor J, Taylor JS.

Department of Family Medicine , Alpert Medical School of Brown University ,

Providence , Rhode Island , USA.

Background: Transitioning from a preclinical to a clinical curriculum can be

challenging for medical students. As a central component of a new 3-week

transition course, we designed, implemented, and evaluated an innovative Virtual

Family Curriculum to introduce rising 3rd-year medical students to the knowledge,

skills, and cultures of 6 core medical and surgical specialties. Description: The

authors designed a 6-case, 24-hour, 3-generation Virtual Family Curriculum and a

6-station summative Objective Structured Clinical Examination (OSCE). Each case

contains a lecture, video, discussion questions, skills practice, and faculty

guide. We used both qualitative and quantitative evaluation methods. Evaluation:

Ninety-eight students took the inaugural course in 2012. All students passed the

final OSCE. Students rated the virtual family curriculum a 5.17/6 (6 = highest).

Comments about the curriculum were uniformly positive. Conclusions: We created

and implemented an integrated Virtual Family Curriculum that systematically

teaches specialty-specific knowledge and skills. This curriculum facilitates

students' transition to clinical clerkships.

PMID: 24112204 [PubMed - in process]

8. Teach Learn Med. 2013;25(4):326-33. doi: 10.1080/10401334.2013.830514.

**The value of bedside rounds: a multicenter qualitative study.**

Gonzalo JD, Heist BS, Duffy BL, Dyrbye L, Fagan MJ, Ferenchick GS, Harrell H,

Hemmer PA, Kernan WN, Kogan JR, Rafferty C, Wong R, Elnicki DM.

Department of Medicine , Pennsylvania State University College of Medicine ,

Hershey , Pennsylvania , USA.

Background: Bedside rounds have decreased on teaching services, raising concern

about trainees' clinical skills and patient-physician relationships. Purpose: We

sought to identify recognized bedside teachers' perceived value of bedside rounds

to assist in the promotion of bedside rounds on teaching services. Methods:

Authors used a grounded theory, qualitative study design of telephone

semistructured interviews with bedside teachers (n = 34) from 10 U.S.

institutions (2010-2011). Main outcomes were characteristics of participants,

themes pertaining to the perceived value of bedside rounds, and quotations

highlighting each respective theme. Results: The mean years in academic medicine

was 13.7, and 51% were associate or full professors. Six main themes emerged: (a)

skill development for learners (e.g., physical examination, communication, and

clinical decision-making skills); (b) observation and feedback; (c)

role-modeling; (d) team building among trainees, attending, and patient; (e)

improved patient care delivery through combined clinical decision-making and team

consensus; and (f) the culture of medicine as patient-centered care, which was

embodied in all themes. Conclusions: Bedside teachers identify potential benefits

of bedside rounds, many of which align with national calls to change our approach

to medical education. The practice of bedside rounds enables activities essential

to high-quality patient care and education.

PMID: 24112202 [PubMed - in process]

9. Teach Learn Med. 2013;25(4):312-8. doi: 10.1080/10401334.2013.827979.

**Human dimensions in bedside teaching: focus group discussions of teachers and**

**learners.**

Ramani S, Orlander JD.

Department of Medicine , Boston University School of Medicine , Boston ,

Massachusetts , USA.

Background: Clinical teaching has moved from the bedside to conference rooms;

many reasons are described for this shift. Yet, essential clinical skills,

professionalism, and humanistic patient interactions are best taught at the

bedside. Purpose: Clinical teaching has moved from the bedside to conference

rooms; many reasons are described for this decline. This study explored

perceptions of teachers and learners on the value of bedside teaching and the

humanistic dimensions of bedside interactions that make it imperative to shift

clinical teaching back to the bedside. Method: Focus group methodology was used

to explore teacher and learner opinions. Four teacher groups consisted of (a)

Chief Residents, (b) Residency Program Directors, (c) skilled bedside teachers,

and (d) a convenience group of other Department of Medicine faculty at Boston

University School of Medicine. Six learner groups consisted 2 each of 3rd-year

students, PGY1 medicine residents, and PGY2 medicine residents. Each discussion

lasted 60 to 90 minutes. Sessions were audiotaped, transcribed, and analyzed

using qualitative methods. Results: Teachers and learners shared several opinions

on bedside teaching, particularly around humanistic aspects of bedside

interactions. The key themes that emerged included (a) patient involvement in

discussions, (b) teachers as role models of humanism, (c) preserving learner

autonomy, (d) direct observation and feedback of learners at the bedside, (e)

interactions with challenging patients, and (e) admitting limitations. Within

these themes, participants noted some behaviors best avoided at the bedside.

Conclusions: Teachers and learners regard the bedside as a valuable venue in

which to learn core values of medicine. They proposed many strategies to preserve

these humanistic values and improve bedside teaching. These strategies are

essential for true patient-centered care.

PMID: 24112200 [PubMed - in process]

10. Teach Learn Med. 2013;25(4):292-9. doi: 10.1080/10401334.2013.827972.

**Mobile technology for the facilitation of direct observation and assessment of**

**student performance.**

Ferenchick GS, Solomon D, Foreback J, Towfiq B, Kavanaugh K, Warbasse L, Addison

J, Chames F, Dandan A, Mohmand A.

Department of Medicine , Michigan State University College of Human Medicine ,

East Lansing , Michigan , USA.

Background: We developed, implemented, and assessed a web-based clinical

evaluation application (i.e., CEX app) for Internet-enabled mobile devices,

including mobile phones. The app displays problem-specific checklists that

correspond to training problems created by the Clerkship Directors in Internal

Medicine. Purpose: We hypothesized that use of the CEX app for directly observing

students' clinical skills would be feasible and acceptable, and would demonstrate

adequate reliability and validity. Methods: Between July 2010 and February 2012,

266 third-year medical students completed 5 to 10 formative CEXs during their

internal medicine clerkship. The observers (attendings and residents), who

performed the CEX, used the app to guide and document their observations, record

their time observing and giving feedback to the students, and their overall

satisfaction with the CEX app. Interrater reliability and validity were assessed

with 17 observers who viewed 6 videotaped student-patient encounters, and by

measuring the correlation between student CEX scores and their scores on

subsequent standardized-patient Objective Structured Clinical Examination (OSCE)

exams. Results: A total of 2,523 CEXs were completed by 411 observers. The

average number of evaluations per student was 9.8 (± 1.8 SD), and the average

number of CEXs completed per observer was 6 (± 11.8 SD). Observers spent less

than 10 min on 45.3% of the CEXs and 68.6% of the feedback sessions. An

overwhelming majority of observers (90.6%) reported satisfaction with the CEX.

Interrater reliability was measured at 0.69 among the observers viewing the

videotapes, and their ratings discriminated between competent and noncompetent

performances. Student CEX grades, however, did not correlate with their end of

3rd-year OSCE scores. Conclusions: The use of this CEX app is feasible and it

captures students' clinical performance data with a high rate of user

satisfaction. Our embedded checklists had adequate interrater reliability and

concurrent validity. The grades measured on this app, however, were not

predictive of subsequent student performance.

PMID: 24112197 [PubMed - in process]

11. Acad Med. 2013 Aug;88(8):1189. doi: 10.1097/ACM.0b013e31829d5815.

**AM last page. How Pierre Bourdieu's theory and concepts can apply to medical**

**education.**

Varpio L, Albert M.

Uniformed Services University of the Health Sciences, USA. lara.varpio@usuhs.edu

PMID: 23899858 [PubMed - indexed for MEDLINE]

12. Acad Med. 2013 Aug;88(8):1058-60. doi: 10.1097/ACM.0b013e31829a3c32.

**Is clinical cognition binary or continuous?**

Norman G, Monteiro S, Sherbino J.

Comment on

 Acad Med. 2013 Aug;88(8):1074-80.

A dominant theory of clinical reasoning is the so-called "dual processing

theory," in which the diagnostic process may proceed through a rapid,

unconscious, intuitive process (System 1) or a slow, conceptual, analytical

process (System 2). Diagnostic errors are thought to arise primarily from

cognitive biases originating in System 1. In this issue, Custers points out that

this model is unnecessarily restrictive and that it is more likely that

diagnostic tasks may proceed through a variety of mental strategies ranging from

"analytical" to "intuitive."The authors of this commentary agree that the notion

that System 1 and System 2 processes are somehow in competition and will

necessarily lead to different conclusions is unnecessarily restrictive. On the

other hand, they argue that there is substantial evidence in support of a dual

processing model, and that most objections to dual processing theory can be

easily accommodated by simply presuming that both processes operate in concertand

that solving any task may rely to varying degrees on both processes.

PMID: 23899852 [PubMed - indexed for MEDLINE]

13. Acad Med. 2013 Aug;88(8):1135-41. doi: 10.1097/ACM.0b013e31829a6c39.

**How do medical students navigate the interplay of explicit curricula, implicit**

**curricula, and extracurricula to learn curricular objectives?**

Balmer DF, Hall E, Fink M, Richards BF.

Center for Research, Innovation and Scholarship, Texas Children's Hospital,

Houston, Texas, USA.

PURPOSE: Current focus in medical education on competencies and curricular

objectives draws attention to boundaries rather than the openness inherent in the

learning process. This qualitative study explored the tension between boundedness

(mandated curricular objectives) and openness (variability in learning experience

as students traverse the explicit, implicit, and extracurriculum) in the

curriculum.

METHOD: Following the revision and implementation of 10 curricular objectives for

Columbia University College of Physicians and Surgeons, the authors interviewed

18 fourth-year medical students in spring 2011. For each objective, students

indicated the relative influence of the explicit curriculum, implicit curriculum,

and extracurriculum on their learning. Students were asked to think aloud and

assign points as they made these judgments. Quantitative and qualitative data

were analyzed to understand students' perceptions of learning across curricula

and for each curricular objective.

RESULTS: There was marked variability in students' learning experience. For two

objectives, students perceived that learning occurred mainly in the explicit

curriculum and consumed a disproportionate amount of study time. For two other

objectives, students perceived that learning occurred mainly in the

extracurriculum because opportunities to learn these objectives in the implicit

and explicit curricula were sparse. For six objectives, students perceived that

learning occurred mostly in the implicit curriculum, often through "watching" or

interacting with peers.

CONCLUSIONS: The findings can inform discussions about how to balance the

boundedness of curricular mandates with the inherent openness of students'

learning experiences.

PMID: 23807112 [PubMed - indexed for MEDLINE]

14. Acad Med. 2013 Aug;88(8):1088-94. doi: 10.1097/ACM.0b013e31829a3b2b.

**Toward a common taxonomy of competency domains for the health professions and**

**competencies for physicians.**

Englander R, Cameron T, Ballard AJ, Dodge J, Bull J, Aschenbrener CA.

Competency-based Learning and Assessment, Association of American Medical

Colleges, Washington, DC 20037, USA. renglander@aamc.org

Although health professions worldwide are shifting to competency-based education,

no common taxonomy for domains of competence and specific competencies currently

exists. In this article, the authors describe their work to (1) identify domains

of competence that could accommodate any health care profession and (2) extract a

common set of competencies for physicians from existing health professions'

competency frameworks that would be robust enough to provide a single, relevant

infrastructure for curricular resources in the Association of American Medical

Colleges' (AAMC's) MedEdPORTAL and Curriculum Inventory and Reports (CIR) sites.

The authors used the Accreditation Council for Graduate Medical Education

(ACGME)/American Board of Medical Specialties six domains of competence and 36

competencies delineated by the ACGME as their foundational reference list. They

added two domains described by other groups after the original six domains were

introduced: Interprofessional Collaboration (4 competencies) and Personal and

Professional Development (8 competencies). They compared the expanded reference

list (48 competencies within eight domains) with 153 competency lists from across

the medical education continuum, physician specialties and subspecialties,

countries, and health care professions. Comparison analysis led them to add 13

"new" competencies and to conflate 6 competencies into 3 to eliminate redundancy.

The AAMC will use the resulting "Reference List of General Physician

Competencies" (58 competencies in eight domains) to categorize resources for

MedEdPORTAL and CIR. The authors hope that researchers and educators within

medicine and other health professions will consider using this reference list

when applicable to move toward a common taxonomy of competencies.

PMID: 23807109 [PubMed - indexed for MEDLINE]

15. Acad Med. 2013 Aug;88(8):1074-80. doi: 10.1097/ACM.0b013e31829a3b10.

**Medical education and cognitive continuum theory: an alternative perspective on**

**medical problem solving and clinical reasoning.**

Custers EJ.

Center for Research and Development of Education, University Medical Center,

Utrecht, The Netherlands. ecusters@umcutrecht.nl

Comment in

 Acad Med. 2013 Aug;88(8):1058-60.

Recently, human reasoning, problem solving, and decision making have been viewed

as products of two separate systems: "System 1," the unconscious, intuitive, or

nonanalytic system, and "System 2," the conscious, analytic, or reflective

system. This view has penetrated the medical education literature, yet the idea

of two independent dichotomous cognitive systems is not entirely without

problems.This article outlines the difficulties of this "two-system view" and

presents an alternative, developed by K.R. Hammond and colleagues, called

cognitive continuum theory (CCT). CCT is featured by three key assumptions.

First, human reasoning, problem solving, and decision making can be arranged on a

cognitive continuum, with pure intuition at one end, pure analysis at the other,

and a large middle ground called "quasirationality." Second, the nature and

requirements of the cognitive task, as perceived by the person performing the

task, determine to a large extent whether a task will be approached more

intuitively or more analytically. Third, for optimal task performance, this

approach needs to match the cognitive properties and requirements of the task.

Finally, the author makes a case that CCT is better able than a two-system view

to describe medical problem solving and clinical reasoning and that it provides

clear clues for how to organize training in clinical reasoning.

PMID: 23807108 [PubMed - indexed for MEDLINE]

16. Acad Med. 2013 Aug;88(8):1095-8. doi: 10.1097/ACM.0b013e31829a3a33.

**Introducing medical students to careers in medical education: the student track**

**at an annual medical education conference.**

Blatt B, Plack M, Suzuki M, Arepalli S, Schroth S, Stagnaro-Green A.

Department of Medicine, The George Washington University School of Medicine and

Health Sciences, Washington, DC 20037, USA. jblatt@gwu.edu

Few avenues exist to familiarize medical students with careers as

clinician-educators, and the clinician-educator career pathway has not been well

defined. In this article, the authors describe how they integrated a

career-oriented student track into the 2011 Northeast Group on Educational

Affairs (NEGEA) annual retreat to introduce students to careers in medical

education. Annual education conferences are principal sources of educational

scholarship, networking, collaboration, and information sharing; as such, they

represent attractive venues for early exposure to the culture of medical

education. The authors' goal in creating the NEGEA conference student track was

to excite students about careers in medical education by providing them with an

array of opportunities for active involvement in both student-specific and

general conference activities.The authors draw from their experience to provide a

guide for recruiting student participants to career-building student tracks. They

also offer a guide for developing future student tracks, based on their

experience and grounded in social cognitive career theory. Although their focus

is on medical education, they believe these guides will be useful for educators

planning a conference-based student track in any field.

PMID: 23807107 [PubMed - indexed for MEDLINE]

17. Acad Med. 2013 Aug;88(8):1164-70. doi: 10.1097/ACM.0b013e31829a3689.

**Satisfaction, motivation, and future of community preceptors: what are the**

**current trends?**

Latessa R, Colvin G, Beaty N, Steiner BD, Pathman DE.

University of North Carolina (UNC) School of Medicine-Asheville, Asheville, NC

28801, USA. latessa@mahec.net

PURPOSE: To measure overall satisfaction of community-based preceptors, their

anticipated likelihood of continuing to teach, professional satisfaction,

influence of having students, motivation for teaching, satisfaction with

professional practice, and satisfaction with and value of incentives, and to

compare results with those of a similar 2005 statewide survey.

METHOD: In 2011, the authors distributed a 25-item survey to all 2,359

community-based primary care preceptors (physicians, pharmacists, advanced

practice nurses, physician assistants) served by the North Carolina Area Health

Education Centers system's Offices of Regional Primary Care Education. The survey

targeted the same items and pool of eligible respondents as did the North

Carolina Area Health Education Center 2005 Preceptor Survey.

RESULTS: Of 2,359 preceptors contacted, 1,278 (54.2%) completed questionnaires.

The data from 2011 did not differ significantly from the 2005 data. In 2011,

respondents were satisfied with precepting (91.7%), anticipated continuing to

precept for the next five years (88.7%), and were satisfied overall with their

professional life (93.7%). Intrinsic reasons (e.g., enjoyment of teaching)

remained an important motivation for teaching students. Physicians reported

significantly lower overall satisfaction with extrinsic incentives (e.g.,

monetary compensation) and felt more negativity about the influence of students

on their practices.

CONCLUSIONS: This study found that preceptors continue to be satisfied with

teaching students. Intrinsic reasons remain an important motivation to precept,

but monetary compensation may have increasing importance. Physicians responded

more negatively than other health provider groups to several questions,

suggesting that their needs might be better met by redesigned teaching models.

PMID: 23807105 [PubMed - indexed for MEDLINE]

18. Acad Med. 2013 Aug;88(8):1171-7. doi: 10.1097/ACM.0b013e318299f3e3.

**Teaching empathy to medical students: an updated, systematic review.**

Batt-Rawden SA, Chisolm MS, Anton B, Flickinger TE.

King's College Hospital, London, England.

PURPOSE: Some research shows that empathy declines during medical school. The

authors conducted an updated, systematic review of the literature on

empathy-enhancing educational interventions in undergraduate medical education.

METHOD: The authors searched PubMed, EMBASE, PsycINFO, CINAHL, Scopus, and Web of

Science (January 1, 2004 through March 19, 2012) using key words related to

undergraduate medical education and empathy. They independently selected and

reviewed all English-language articles that described an educational intervention

designed to promote empathy in medical students, assessing the quality of the

quantitative studies using the Medical Education Research Study Quality

Instrument (MERSQI).

RESULTS: The authors identified and reviewed the full texts of 18 articles (15

quantitative and 3 qualitative studies). Included interventions used one or more

of the following-patient narrative and creative arts (n=7), writing (n=3), drama

(n=1), communication skills training (n=4), problem-based learning (n=1),

interprofessional skills training (n=1), patient interviews (n=4), experiential

learning (n=2), and empathy-focused training (n=1). Fifteen articles reported

significant increases in empathy. Mean effect size was 0.23. Mean MERSQI score

was 10.13 (range 6.5-14).

CONCLUSIONS: These findings suggest that educational interventions can be

effective in maintaining and enhancing empathy in undergraduate medical students.

In addition, they highlight the need for multicenter, randomized controlled

trials, reporting long-term data to evaluate the longevity of intervention

effects. Defining empathy remains problematic, and the authors call for

conceptual clarity to aid future research.

PMID: 23807099 [PubMed - indexed for MEDLINE]

19. Acad Med. 2013 Aug;88(8):1067-73. doi: 10.1097/ACM.0b013e318299396f.

**From Flexner to competencies: reflections on a decade and the journey ahead.**

Carraccio CL, Englander R.

American Board of Pediatrics, Chapel Hill, North Carolina 27514, USA.

ccarraccio@abpeds.org

This article is a sequel to one published in 2002 only a few years after the

initiation of the shift to competency-based medical education (CBME). The authors

reflect on the major forces that have influenced the movement and tipped the

balance toward widespread adoption of CBME in the United States, primarily in

graduate medical education. These forces include regulatory bodies, international

counterparts, and the general public. The authors highlight the most important

lessons learned over the decade. These include (1) the need for standardization

of language to develop a shared vision of the path ahead, (2) the power of direct

observation in assessment, (3) the challenge of developing meaningful measures of

performance, (4) desired outcomes as the starting point for curriculum

development, (5) dependence on reflection in the development of expertise, (6)

the need for exploiting the role of learners in their learning, and (7) competent

clinical systems as the required learning environment for producing competent

physicians.The authors speculate on why this most recent attempt to shift to CBME

differs from previous aborted attempts. They conclude by explaining how the

recent lessons learned inform the vision of what successful implementation of

CBME would look like, and discussing the importance of milestones, entrustable

professional activities, and an integrated, rather than a reductionist, approach

to assessment of competence. The fundamental question at each step along the way

in implementing CBME should be "How do we improve medical education to provide

better care for patients?"

PMID: 23807096 [PubMed - indexed for MEDLINE]

**July 2013 PubMed Journal Watch**

1. Acad Med. 2013 Jul;88(7):921-3. doi: 10.1097/ACM.0b013e3182956017.

**The synergy of medicine and art in the curriculum.**

Mullangi S.

Harvard Medical School, Boston, MA 02115, USA. samyukta\_mullangi@hms.harvard.edu

This is a commentary in which a fourth-year medical student argues for the relevance of the arts and humanities and the need to sustain medical students' exposure to these through the medical curriculum. She writes that the point of incorporating the visual arts, literature, music, and other arts into the curriculum is not necessarily to "teach" professionalism but, rather, to offer students a viable, lifelong tool to reorient themselves as they move along in their training. The advantages that the humanities offer are multifactorial: They offer a space for discussion about topics such as death and dying-and coping with dying patients-such that students can feel safe and objective in sharing thoughts; they remind students of the patient experience; they eloquently distill muddy feelings into nuanced words; and they serve as an anchoring point for a state of mind that nurtures reflection over the disdain encouraged by the "hidden curriculum" of the wards. The author closes the commentary with excerpts from literature.

PMID: 23799442 [PubMed - in process]

2. Acad Med. 2013 Jul;88(7):918-20. doi: 10.1097/ACM.0b013e3182959e16.

**The woman in the mirror: humanities in medicine**.

Huyler F.

Emergency Medicine, University of New Mexico, Albuquerque, NM 87131, USA. F.Huyler@gmail.com

While the role of the sciences in medicine and medical training is unquestioned and should remain so, the traditional resistance of medical culture to the humanities and humanistic argument does not serve the medical profession well, nor does it do justice either to the challenges or rewards of clinical practice.

PMID: 23799440 [PubMed - in process]

3. Med Teach. 2013 Jul;35(7):e1252-66. doi: 10.3109/0142159X.2013.789132.

**Teaching professionalism in medical education: a Best Evidence Medical Education (BEME) systematic review. BEME Guide No. 25.**

Birden H, Glass N, Wilson I, Harrison M, Usherwood T, Nass D.

University Centre for Rural Health, Lismore, New South Wales, Australia.

hudson.birden@sydney.edu.au

INTRODUCTION: We undertook a systematic review to identify the best evidence for how professionalism in medicine should be taught. METHODS: Eligible studies included any articles published between 1999 and 2009 inclusive. We reviewed papers presenting viewpoints and opinions as well as empirical research. We performed a comparative and thematic synthesis on all papers meeting inclusion criteria in order to capture the best available evidence on how to teach professionalism. RESULTS: We identified 217 papers on how to teach professionalism. Of these, we determined 43 to be best evidence. Few studies provided comprehensive evaluation or assessment data demonstrating success. As yet, there has not emerged a unifying theoretical or practical model to integrate the teaching of professionalism into the medical curriculum. DISCUSSION: Evident themes in the literature are that role modelling and personal reflections, ideally guided by faculty, are the important elements in current teaching programmes, and are widely held to be the most effective techniques for developing professionalism. While it is generally held that professionalism should be part of the whole of a medical curriculum, the specifics of sequence, depth, detail, and the nature of how to integrate professionalism with other curriculum elements remain matters of evolving theory.

PMID: 23829342 [PubMed - in process]

4. Med Teach. 2013 Jul;35(7):613-5. doi: 10.3109/0142159X.2013.819685.

**eMedical Teacher. Scholarship in an age of big data.**

Ellaway R.

Northern Ontario School of Medicine, Canada.

PMID: 23829340 [PubMed - in process]

5. Teach Learn Med. 2013;25(3):242-8. doi: 10.1080/10401334.2013.797349.

**Last chance to observe: assessing residency preparedness following the 4th-year subinternship.**

Mischler M, Miller G, Aldag J, Aiyer MK.

Department of Internal Medicine, University of Illinois College of Medicine at

Peoria, Peoria, Illinois 61605, USA. mmisch1@uic.edu

BACKGROUND: The subinternship is an integral part of the 4th year of medical school. There is little description of innovations aimed at assessing the preparedness and confidence of graduating students as they move on the next step in their training. DESCRIPTION: An innovation including an Objective Structured Clinical Examination (OSCE) at the conclusion of the subinternship was designed. We focused on key themes of transitions of care, communication within the health care system, and communication with patients and providers. EVALUATION: A pre- and postsurvey addressed student self-perceived skill, confidence, and overall perception of importance. Improvement (p<.05) was seen across all themes from pre- to postsurvey, with more favorable scores on the postsurvey. CONCLUSIONS: A subinternship innovation including an OSCE was feasible and had a positive effect on student assessment, perception and confidence. As the landscape of medical education evolves, assessing students' preparedness for residency will become increasingly imperative.

PMID: 23848332 [PubMed - in process]

6. Teach Learn Med. 2013;25(3):231-6. doi: 10.1080/10401334.2013.797343.

**Team-based learning from theory to practice: faculty reactions to the innovation**.

Sutherland S, Bahramifarid N, Jalali A.

Academy for Innovation in Medical Education, University of Ottawa, Ottawa,

Ontario, Canada. d3evaluate@gmail.com

BACKGROUND: Limited studies have examined the factors associated with the implementation of team-based learning (TBL). PURPOSE: The purpose of this study was to identify faculty reactions (successes and challenges) associated with the implementation of a modified TBL in undergraduate anatomy teaching. METHOD: To obtain faculty reactions to the TBL approach, data collection included focus groups, observations, and document analysis. Using the constant comparative method, our analysis yielded four key themes. RESULTS: Four themes based on faculty reactions to the implementation of TBL included transportability and local adaptations, faculty/tutor role confusion, student preparedness, and teacher-targeted bullying. CONCLUSIONS: Future physicians will need educational programs that embrace the theory and practice of teamwork. Schools adopting team-based learning approaches will need to carefully consider their local environments so as to successfully transport innovative practices alongside local adaptations. As front-line implementers faculty will require initial and ongoing professional development. The TBL method is amenable to local modifications and holds promise as a pedagogical strategy to garner increased student engagement and student achievement in their learning.

PMID: 23848330 [PubMed - in process]

7. Teach Learn Med. 2013;25(3):225-30. doi: 10.1080/10401334.2013.797346.

**The internal medicine clerkship and ambulatory learning experiences: results of the 2010 clerkship directors in internal medicine survey.**

Shaheen A, Papp KK, Torre D.

Department Clinical Medicine, University of North Carolina at Chapel Hill, Chapel

Hill, North Carolina 27599, USA. Shaheen@med.unc.edu

BACKGROUND: Education in the ambulatory setting should be an integral part of undergraduate medical education. However, previous studies have shown education in this setting has been lacking in medical school. Ambulatory education occurs on some internal medicine clerkships. The extent of this education is unclear. PURPOSE: The purpose of this survey was to assess the structure, curriculum, assessment methods, and barriers to implementation of ambulatory education on the internal medicine clerkship. METHODS: An annual survey of institutional members of the Clerkship Directors in Internal Medicine (CDIM) was done in April 2010. The data were anonymous and descriptive statistics were used to summarize responses. Free text results were analyzed using qualitative techniques.

RESULTS: The response rate was 75%. The majority of respondents had a required ambulatory component to the clerkship. Ambulatory experiences distinct from the inpatient internal medicine experience were common (46%). Integration with either the inpatient experiences or other departmental clerkships also occurred. The majority of ambulatory educational experiences were with generalists (74%) and/or subspecialists (45%). The most common assessment tool was the National Board of Medical Examiners (NBME) ambulatory shelf exam. Thematic analysis of the question about how practice based learning was taught elicited four major themes: Not taught; taught in the context of learning evidence based medicine; taught while learning chronic disease management with quality improvement; taught while learning about health care finance. Barriers to implementation included lack of

faculty and financial resources. CONCLUSIONS: There have been significant increases in the amount of time dedicated to ambulatory internal medicine. The numbers of medical schools with ambulatory internal medicine education has increased. Integration of the ambulatory experiences with other clerkships such as family medicine occurs. Curriculum was varied but difficulties with dissemination and assessment in these disparate settings was noted. Overall, the results of this study demonstrate increased implementation and recognition of the importance of ambulatory education in internal medicine.

PMID: 23848329 [PubMed - in process]

8. Teach Learn Med. 2013;25(3):207-10. doi: 10.1080/10401334.2013.797353.

**Low cost, high yield: simulation of obstetric emergencies for family medicine training.**

Magee SR, Shields R, Nothnagle M.

Memorial Hospital, Family Medicine, Pawtucket, Rhode Island 02860, USA.

susanna\_magee@mhri.org

BACKGROUND: Simulation is now the educational standard for emergency training in residency and is particularly useful on a labor and delivery unit, which is often a stressful environment for learners given the frequency of emergencies. However, simulation can be costly. PURPOSE: This study aimed to assess the feasibility and effectiveness of low-cost simulated obstetrical emergencies in training family medicine residents. METHODS: The study took place in a community hospital in an urban underserved setting in the northeast United States. Low-cost simulations were developed for postpartum hemorrhage (PPH) and preeclampsia/eclampsia (PEC). Twenty residents were randomly assigned to the intervention (simulated PPH or PEC followed by debriefing) or control (lecture on PPH or PEC) group, and equal numbers of residents were assigned to each scenario. All participants completed a written test at baseline and an oral exam 6 months later on the respective scenario to which they were assigned. The participants provided written feedback on their respective teaching interventions. We compared performance on pretests and posttests by group using Wilcoxon Rank Sum. RESULTS: Twenty residents completed the study. Both groups performed similarly on baseline tests for both scenarios. Compared to controls, intervention residents scored significantly higher on the examination on the management of PPH but not for PEC. All intervention group participants reported that the simulation training was "extremely useful," and most found it "enjoyable." CONCLUSIONS: We demonstrated the feasibility and acceptability of two low-cost obstetric emergency simulations and found that they may result in persistent increases in trainee knowledge.

PMID: 23848326 [PubMed - in process]

9. Teach Learn Med. 2013;25(3):195-200. doi: 10.1080/10401334.2013.797342.

**From see one do one, to see a good one do a better one: learning physical examination skills through peer observation.**

St-Onge C, Martineau B, Harvey A, Bergeron L, Mamede S, Rikers R.

Department of Medicine, University of Sherbrooke, Sherbrooke, Quebec, Canada.

Christina.St-Onge@USherbrooke.ca

BACKGROUND: Learning and mastering the skills required to execute physical exams is of great importance and should be fostered early during medical training. Observing peers has been shown to positively influence the acquisition of psychomotor skills. PURPOSE: The current study investigated the influence of peer observation on the acquisition of psychomotor skills required to execute a physical examination. METHODS: Second-year medical students (N=194) learned the neurological physical examination for low back pain in groups of three. Each student learned and performed the physical examination while the other students observed. Analyses compared the impact of the quantity and the quality of observed performances on students' learning of the physical examination skills. RESULTS: Students benefited from observing peers while they executed their examination. Moreover, observing a high-performing peer increased the acquisition of physical examination skills. CONCLUSIONS: Results suggest that group learning activities that allow students to observe their peers during physical examination should be favored.

PMID: 23848324 [PubMed - in process]

10. Teach Learn Med. 2013;25(3):191-4. doi: 10.1080/10401334.2013.797348.

**Short course in evidence-based medicine improves knowledge and skills of undergraduate medical students: a before-and-after study.**

Barghouti FF, Yassein NA, Jaber RM, Khader NJ, Al Shokhaibi S, Almohtaseb A,

AbuRmaileh N.

Department of Community and Family Medicine, Jordan University, Amman, Jordan.

f\_barghouty@live.com

BACKGROUND: Providing evidence-based care is recognized as a key skill for health care workers from diverse professions and cultures. PURPOSE: We aimed to assess the effectiveness of a short course in evidence-based medicine (EBM) to change the knowledge and skills of undergraduate medical students and point to possible incorporation of EBM in their curriculum. METHODS: This is a before-and-after study that was evaluated by the Fresno questionnaire. A 2-week short course of lectures, seminars, online search, and answering worksheets was conducted on 54 fifth-year medical students rotating through the family medicine department at Jordan University Hospital from September 1 until mid-December 2011. RESULTS: The students achieved a mean score of 26.7 out of 200 in the pretest and 119.5 in the posttest. The mean difference between the pre- and posttests was 92.8, a statistically significant result with a 95% confidence interval of 84.7, 101.0 (p<.0001) with an effect size of 4.2 standard deviation units. CONCLUSIONS: A short course in EBM will significantly improve the skills and knowledge of undergraduate medical students.

PMID: 23848323 [PubMed - in process]

11. Med Teach. 2013 Jul 24. [Epub ahead of print]

**Twelve tips for designing and running longitudinal integrated clerkships**.

Ellaway R, Graves L, Berry S, Myhre D, Cummings BA, Konkin J.

Northern Ontario School of Medicine , Canada.

Longitudinal integrated clerkships (LICs) involve learners spending an extended time in a clinical setting (or a variety of interlinked clinical settings) where their clinical learning opportunities are interwoven through continuities of patient contact and care, continuities of assessment and supervision, and continuities of clinical and cultural learning. Our twelve tips are grounded in the lived experiences of designing, implementing, maintaining, and evaluating LICs, and in the extant literature on LICs. We consider: general issues (anticipated benefits and challenges associated with starting and running an LIC); logistical issues (how long each longitudinal experience should last, where it will take place, the number of learners who can be accommodated); and integration issues (how the LIC interfaces with the rest of the program, and the need for evaluation that aligns with the dynamics of the LIC model). Although this paper is primarily aimed at those who are considering setting up an LIC in their own institutions or who are already running an LIC we also offer our recommendations as a reflection on the broader dynamics of medical education and on the priorities and issues we all face in designing and running educational programs.

PMID: 23883396 [PubMed - as supplied by publisher]

12. Med Teach. 2013 Jul 18. [Epub ahead of print]

**The development and validation of a short form of the STERLinG: A practical, valid and reliable tool to evaluate teacher competencies to encourage reflective learning.**

Schönrock-Adema J, Schaub-De Jong MA, Cohen-Schotanus J.

University of Groningen, University Medical Center Groningen , The Netherlands.

Background: To optimize response rates, it is important to have brief, comprehensive instruments. Aims: We have developed and validated a short form of an instrument for measuring students' perceptions of teachers' competencies to encourage students' reflective learning in small groups (the STERLinG). Methods: Based on statistical and content criteria, the original 36-item STERLinG was reduced to 15 items: three scales with five items each. This mini-STERLinG was validated. Confirmatory factor analysis was performed and internal consistencies were calculated. Results: The instrument was completed by 501 respondents (63%). The original instrument structure was confirmed with 62.6% explained variance. Reliabilities were high with 0.91 for the entire mini-STERLinG and 0.87, 0.85 and 0.81 for its subscales. Conclusions: The mini-STERLinG was found to be a feasible, valid and reliable instrument.

PMID: 23862754 [PubMed - as supplied by publisher]

13. Acad Med. 2013 Jul;88(7):972-7. doi: 10.1097/ACM.0b013e318294e99a.

**The impact of lecture attendance and other variables on how medical students evaluate faculty in a preclinical program.**

Martin SI, Way DP, Verbeck N, Nagel R, Davis JA, Vandre DD.

Division of Infectious Diseases, and associate director, Integrated Pathway

Curriculum, Ohio State University College of Medicine, Columbus, OH 43210, USA.

stanley.martin@osumc.edu

PURPOSE: High-quality audiovisual recording technology enables medical students to listen to didactic lectures without actually attending them. The authors wondered whether in-person attendance affects how students evaluate lecturers. METHOD: This is a retrospective review of faculty evaluations completed by first-and second-year medical students at the Ohio State University College of Medicine during 2009-2010. Lecture-capture technology was used to record all lectures. Attendance at lectures was optional; however, all students were required to complete lecturer evaluation forms. Students rated overall instruction using a five-option response scale. They also reported their attendance. The authors used analysis of variance to compare the lecturer ratings of attendees versus nonattendees. The authors included additional independent variables-year of student, student grade/rank in class, and lecturer degree-in the analysis. RESULTS: The authors analyzed 12,092 evaluations of 220 lecturers received from 358 students. The average number of evaluations per lecturer was 55. Seventy-four percent (n = 8,968 evaluations) of students attended the lectures they evaluated, whereas 26% (n = 3,124 evaluations) viewed them online. Mean lecturer ratings from attendees was 3.85 compared with 3.80 by nonattendees (P ≤ .05; effect size: 0.055). Student's class grade and year, plus lecturer degree, also affected students' evaluations of lecturers (effect sizes: 0.055-0.3).

CONCLUSIONS: Students' attendance at lectures, year, and class grade, as well as lecturer degree, affect students' evaluation of lecturers. This finding has ramifications on how student evaluations should be collected, interpreted, and used in promotion and tenure decisions in this evolving medical education environment.

PMID: 23702517 [PubMed - in process]

14. Acad Med. 2013 Jul;88(7):1038-45. doi: 10.1097/ACM.0b013e318294fd29.

**Advancing faculty development in medical education: a systematic review**.

Leslie K, Baker L, Egan-Lee E, Esdaile M, Reeves S.

Centre for Faculty Development, University of Toronto, Li Ka Shing International

Healthcare Education Centre, St. Michael's Hospital, Toronto, Ontario, Canada.

lesliek@smh.ca

PURPOSE: To (1) provide a detailed account of the nature and scope of faculty development (FD) programs in medical education, (2) assess the quality of FD studies, and (3) identify in what areas and through what means future research can purposefully build on existing knowledge. METHOD: The authors searched MEDLINE, CINAHL, and ERIC for articles reporting evaluations of FD initiatives published between 1989 and 2010. They applied standard systematic review procedures for sifting abstracts, scrutinizing full texts, and abstracting data, including program characteristics, evaluation methods, and outcomes. They used a modified Kirkpatrick model to guide their data abstraction. RESULTS: The authors included 22 articles reporting on 21 studies in their review. The most common program characteristics included a series/longitudinal format, intended for individuals, and offered to physicians only. Although the most common aim was to improve teaching effectiveness, several programs had multiple aims, including scholarship and leadership. Program evaluation focused on quantitative approaches. A number of studies employed longitudinal designs and included some follow-up component. Surveys were the most popular data collection method, participants the most common data source, and self-reported behavior changes the most commonly reported outcome. CONCLUSIONS: Although the authors' findings showed some recent expansion in the scope of the FD literature, they also highlighted areas that require further focus and growth. Future research should employ more rigorous evaluation methods, explore the role of interprofessional teams and communities of practice in the workplace, and address how different organizational and contextual factors shape the success of FD programs.

PMID: 23702523 [PubMed - in process]

15. Acad Med. 2013 Jul;88(7):924-8. doi: 10.1097/ACM.0b013e318294fd5b.

**A humble task: restoring virtue in an age of conflicted interests**.

DuBois JM, Kraus EM, Mikulec AA, Cruz-Flores S, Bakanas E.

Bander Center for Medical Business Ethics, Saint Louis University, St. Louis, MO

63104, USA. duboisjm@slu.edu

Virtues define how we behave when no one else is watching; accordingly, they serve as a bedrock for professional self-regulation, particularly at the level of the individual physician. From the time of William Osler through the end of the 20th century, physician virtue was viewed as an important safeguard for patients and research participants. However, the Institute of Medicine, Association of American Medical Colleges, and other policy groups-relying on social science data indicating that ethical decisions often result from unconscious and biased processes, particularly in the face of financial conflicts of interest-have increasingly rejected physician virtue as an important safeguard for patients.The authors argue that virtue is still needed in medicine-at least as a supplement to regulatory solutions (such as mandatory disclosures). For example, although rarely treated as a reportable conflict of interest, standard fee-for-service medicine can present motives to prioritize self-interest or institutional interests over patient interests. Because conflicts of interest broadly construed are ubiquitous, physician self-regulation (or professional virtue) is still needed. Therefore, the authors explore three strategies that physicians can adopt to minimize the influence of self-serving biases when making medical business ethics decisions. They further argue that humility must serve as a crowning virtue-not a meek humility but, rather, a courageous willingness to recognize one's own limitations and one's need to use "compensating strategies," such as time-outs and consultation with more objective others, when making decisions in the face of conflicting interests.

PMID: 23702525 [PubMed - in process]

16. Acad Med. 2013 Jul;88(7):929-38. doi: 10.1097/ACM.0b013e318295005f.

**An adaptive approach to facilitating research productivity in a primary care clinical department.**

Weber-Main AM, Finstad DA, Center BA, Bland CJ.

Department of Medicine, University of Minnesota Medical School, Minneapolis, MN

55414, USA. weber005@umn.edu

Efforts to foster the growth of a department's or school's research mission can be informed by known correlates of research productivity, but the specific strategies to be adopted will be highly context-dependent, influenced by local, national, and discipline-specific needs and resources. The authors describe a multifaceted approach-informed by a working model of organizational research productivity-by which the University of Minnesota Department of Family Medicine and Community Health (Twin Cities campus) successfully increased its collective research productivity during a 10-year period (1997-2007) and maintained these increases over time.Facing barriers to recruitment of faculty investigators, the department focused instead on nurturing high-potential investigators among their current faculty via a new, centrally coordinated research program, with provision of training, protected time, technical resources, mentoring, and a scholarly culture to support faculty research productivity. Success of these initiatives is documented by the following: substantial increases in the department's external research funding, rise to a sustained top-five ranking based on National Institutes of Health funding to U.S. family medicine departments, later-stage growth in the faculty's publishing record, increased research capacity among the faculty, and a definitive maturation of the department's research mission. The authors offer their perspectives on three apparent drivers of success with broad applicability-namely, effective leadership, systemic culture change, and the self-awareness to adapt to changes in the local, institutional, and national research environment.

PMID: 23702527 [PubMed - in process]

17. Acad Med. 2013 Jul;88(7):1029-37. doi: 10.1097/ACM.0b013e318294f368.

**Mentoring programs for physicians in academic medicine: a systematic review.**

Kashiwagi DT, Varkey P, Cook DA.

College of Medicine, Mayo Clinic, Rochester, MN 55905, USA.

kashiwagi.deanne@mayo.edu

PURPOSE: Mentoring is vital to professional development in the field of medicine, influencing career choice and faculty retention; thus, the authors reviewed mentoring programs for physicians and aimed to identify key components that contribute to these programs' success. METHOD: The authors searched the MEDLINE, EMBASE, and Scopus databases for articles from January 2000 through May 2011 that described mentoring programs for practicing physicians. The authors reviewed 16 articles, describing 18 programs, extracting program objectives, components, and outcomes. They synthesized findings to determine key elements of successful programs. RESULTS: All of the programs described in the articles focused on academic physicians. The authors identified seven mentoring models: dyad, peer, facilitated peer, speed, functional, group, and distance. The dyad model was most common. The authors identified seven potential components of a formal mentoring program: mentor preparation, planning committees, mentor-mentee contracts, mentor-mentee pairing, mentoring activities, formal curricula, and program funding. Of these, the formation of mentor-mentee pairs received the most attention in published reports. Mentees favored choosing their own mentors; mentors and mentees alike valued protected time. One barrier to program development was limited resources. Written agreements were important to set limits and encourage accountability to the mentoring relationship. Program evaluation was primarily subjective, using locally developed surveys. No programs reported long-term results.

CONCLUSIONS: The authors identified key program elements that could contribute to successful physician mentoring. Future research might further clarify the use of these elements and employ standardized evaluation methods to determine the long-term effects of mentoring.

PMID: 23702518 [PubMed - in process]

18. Acad Med. 2013 Jul;88(7):1022-8. doi: 10.1097/ACM.0b013e3182951959.

**Evidence-based medicine training in undergraduate medical education: a review and**

**critique of the literature published 2006-2011.**

Maggio LA, Tannery NH, Chen HC, ten Cate O, O'Brien B.

Lane Medical Library, Stanford University School of Medicine, Stanford, CA 94035,

USA. lmaggio@stanford.edu

PURPOSE: To characterize recent evidence-based medicine (EBM) educational interventions for medical students and suggest future directions for EBM education. METHOD: The authors searched the MEDLINE, Scopus, Educational Resource Information Center, and Evidence-Based Medicine Reviews databases for English-language articles published between 2006 and 2011 that featured medical students and interventions addressing multiple EBM skills. They extracted data on learner and instructor characteristics, educational settings, teaching methods, and EBM skills covered. RESULTS: The 20 included articles described interventions delivered in 12 countries in classroom (75%), clinic (25%), and/or online (20%) environments. The majority (60%) focused on clinical students, whereas 30% targeted preclinical students and 10% included both. EBM skills addressed included recognizing a knowledge gap (20%), asking a clinical question (90%), searching for information (90%), appraising information (85%), applying information (65%), and evaluating practice change (5%). Physicians were most often identified as instructors (60%); co-teachers included librarians (20%), allied health professionals (10%), and faculty from other disciplines (10%). Many studies (60%) included interventions at multiple points during one year, but none were longitudinal across students' tenures. Teaching methods varied. Intervention efficacy could not be determined. CONCLUSIONS: Settings, learner levels and instructors, teaching methods, and covered skills differed across interventions. Authors writing about EBM interventions should include detailed descriptions and employ more rigorous research methods to allow others to draw conclusions about efficacy. When designing EBM interventions, educators should consider trends in medical education (e.g., online learning, interprofessional education) and in health care (e.g., patient-centered care, electronic health records).

PMID: 23702528 [PubMed - in process]

**June, 2013 Journal Watch Pub Med Results**

**1. Acad Med. 2013 Jun;88(6):904. doi: 10.1097/ACM.0b013e3182971e06.AM last page:**

**Education is not filling a bucket, but lighting a fire:self-determination theory and motivation in medical students.**

**Kusurkar R, ten Cate O.**

**Research in Education, VUmc School of Medical Sciences, Amsterdam.**

**PMID: 23708603 [PubMed - in process]**

**2. Acad Med. 2013 Jun;88(6):745-7. doi: 10.1097/ACM.0b013e31828ffeeb.**

**Preparing MD-PhD students for clinical rotations: navigating the interfacebetween PhD and MD training.**

**Goldberg C, Insel PA.**

**University of California, San Diego School of Medicine, La Jolla, California,USA. charles.goldberg@va.gov**

Many aspects of MD-PhD training are not optimally designed to prepare students for their future roles as translational clinician-scientists. The transition between PhD research efforts and clinical rotations is one hurdle that must be overcome. MD-PhD students have deficits in clinical skills compared with those of their MD-only colleagues at the time of this transition. Reimmersion programs (RPs) targeted to MD-PhD students have the potential to help them navigate this transition. The authors draw on their experience creating and implementing an RP that incorporates multiple types of activities (clinical exam review, objective structured clinical examination, and supervised practice in patient care settings) designed to enhance the participants' skills and readiness for clinical efforts. On the basis of this experience, they note that MD-PhD students' time away from the clinical environment negatively affects their clinical skills, causing them to feel underprepared for clinical rotations. The authors argue that participation in an RP can help students feel more comfortable speaking with and examining patients and decrease their anxiety regarding clinical encounters. The authors propose that RPs can have positive outcomes for improving the transition from PhD to clinical MD training in dual-degree programs. Identifying and addressing this and other transitions need to be considered to improve the educational experience of MD-PhD students.

**PMID: 23708597 [PubMed - in process]**

**3. Acad Med. 2013 Jun;88(6):843-51. doi: 10.1097/ACM.0b013e31828fd5ed.**

**Design, dissemination, and evaluation of an advanced communication elective at seven U.S. medical schools.**

**Mauksch L, Farber S, Greer HT.**

**Department of Family Medicine, University of Washington School of Medicine,Seattle, Washington 98125, USA. mauksch@uw.edu**

PURPOSE: To test educational methods that continue communication training into the fourth year of medical school.METHOD: The authors disseminated and evaluated an advanced communication elective in seven U.S. medical schools between 2007 and 2009; a total of 9 faculty and 22 fourth-year students participated. The elective emphasized peer learning, practice with real patients, direct observation, and applications of video technology. The authors used qualitative and quantitative survey methods and video review to evaluate the experience of students and faculty. RESULTS: Students reported that the elective was better than most medical school clerkships they had experienced. Their self-confidence in time management and in the use of nine communication skills improved significantly. The most valued course components were video review, repeated practice with real patients, and peer observation. Analysis of student videos with real patients and in role-plays showed that some skills (e.g., agenda setting, understanding the patient perspective) were more frequently demonstrated than others (e.g., exploring family and cultural values, communication while using the electronic health record). Faculty highly valued this learner-centered model and reported that their self-awareness and communication skills grew as teachers and as clinicians. CONCLUSIONS: Learner-centered methods such as peer observation and video review and editing may strengthen communication training and reinforce skills introduced earlier in medical education. The course design may counteract a "hidden curriculum" that devalues respectful interactions with trainees and patients. Future research should assess the impact of course elements on skill retention, attitudes for lifelong learning, and patients' health outcomes**.**

**PMID: 23633673 [PubMed - in process]**

**4. Acad Med. 2013 Jun;88(6):748-52. doi: 10.1097/ACM.0b013e3182905ceb.**

**Medical education in the electronic medical record (EMR) era: benefits,challenges, and future directions.**

**Tierney MJ, Pageler NM, Kahana M, Pantaleoni JL, Longhurst CA.**

**Compensation and Pension and Ambulatory Care, VA Palo Alto Healthcare System,Palo Alto, California 94304, USA. Michael.Tierney@va.gov**

In the last decade, electronic medical record (EMR) use in academic medicalcenters has increased. Although many have lauded the clinical and operationalbenefits of EMRs, few have considered the effect these systems have on medical education. The authors review what has been documented about the effect of EMR use on medical learners through the lens of the Accreditation Council for Graduate Medical Education's six core competencies for medical education. They examine acknowledged benefits and educational risks to use of EMRs, consider factors that promote their successful use when implemented in academic environments, and identify areas of future research and optimization of EMRs' role in medical education.

**PMID: 23619078 [PubMed - in process]**

**5. Acad Med. 2013 Jun;88(6):861-5. doi: 10.1097/ACM.0b013e31828fff12.**

**Clinical teaching based on principles of cognitive apprenticeship: views of experienced clinical teachers.**

**Stalmeijer RE, Dolmans DH, Snellen-Balendong HA, van Santen-Hoeufft M, Wolfhagen IH, Scherpbier AJ.Department of Educational Development and Educational Research, Faculty ofHealth, Medicine and Life Sciences, Maastricht University, Maastricht, theNetherlands. r.stalmeijer@maastrichtuniversity.nl**

PURPOSE: To explore (1) whether an instructional model based on principles of cognitive apprenticeship fits with the practice of experienced clinical teachers and (2) which factors influence clinical teaching during clerkships from an environmental, teacher, and student level as perceived by the clinical teachers themselves. The model was designed to apply directly to teaching behaviors of clinical teachers and consists of three phases, advocating teaching behaviors such as modeling, creating a safe learning environment, coaching, knowledge articulation, and exploration. METHOD: A purposive sample of 17 experienced clinical teachers from five different disciplines and four different teaching hospitals took part in semistructured individual interviews. Two researchers independently performed a thematic analysis of the interview transcripts. Coding was discussed within the research team until consensus was reached. RESULTS: All participants recognized the theoretical model as a structured picture of the practice of teaching activities during both regular and senior clerkships. According to participants, modeling and creating a safe learning environment were fundamental to the learning process of both regular and senior clerkship students. Division of teaching responsibilities, longer rotations, and proactive behavior of teachers and students ensured that teachers were able to apply all steps in the model. CONCLUSIONS: The theoretical model can offer valuable guidance in structuring clinical teaching activities and offers suggestions for the design of effective clerkships.

**PMID: 23619074 [PubMed - in process]**

**6. Acad Med. 2013 Jun;88(6):872-83. doi: 10.1097/ACM.0b013e31828ffdcf.**

**Technology-enhanced simulation to assess health professionals: a systematic review of validity evidence, research methods, and reporting quality.**

**Cook DA, Brydges R, Zendejas B, Hamstra SJ, Hatala R.**

**Office of Education Research, Mayo Clinic College of Medicine, Rochester,Minnesota 55905, USA. cook.david33@mayo.edu**

PURPOSE: To summarize the tool characteristics, sources of validity evidence, methodological quality, and reporting quality for studies of technology-enhanced simulation-based assessments for health professions learners. METHOD: The authors conducted a systematic review, searching MEDLINE, EMBASE,CINAHL, ERIC, PsychINFO, Scopus, key journals, and previous reviews through May 2011. They selected original research in any language evaluating simulation-based assessment of practicing and student physicians, nurses, and other health professionals. Reviewers working in duplicate evaluated validity evidence using Messick's five-source framework; methodological quality using the Medical Education Research Study Quality Instrument and the revised Quality Assessment of Diagnostic Accuracy Studies; and reporting quality using the Standards for Reporting Diagnostic Accuracy and Guidelines for Reporting Reliability and Agreement Studies. RESULTS: Of 417 studies, 350 (84%) involved physicians at some stage in training. Most focused on procedural skills, including minimally invasive surgery (N=142), open surgery (81), and endoscopy (67). Common elements of validity evidence included relations with trainee experience (N=306), content (142), relations with other measures (128), and interrater reliability (124). Of the 217 studies reporting more than one element of evidence, most were judged as having high or unclear risk of bias due to selective sampling (N=192) or test procedures (132). Only 64% proposed a plan for interpreting the evidence to be presented (validity argument).CONCLUSIONS: Validity evidence for simulation-based assessments is sparse and is concentrated within specific specialties, tools, and sources of validity evidence. The methodological and reporting quality of assessment studies leaves much room for improvement.

**PMID: 23619073 [PubMed - in process]**

**7. Acad Med. 2013 Jun;88(6):893-901. doi: 10.1097/ACM.0b013e31828ffc23.**

**Social media use in medical education: a systematic review.**

**Cheston CC, Flickinger TE, Chisolm MS.**

**Harvard Medical School, Boston, Massachusetts, USA.**

PURPOSE: The authors conducted a systematic review of the published literature on social media use in medical education to answer two questions: (1) How have interventions using social media tools affected outcomes of satisfaction, knowledge, attitudes, and skills for physicians and physicians-in-training? And (2) What challenges and opportunities specific to social media have educators encountered in implementing these interventions? METHOD: The authors searched the MEDLINE, CINAHL, ERIC, Embase, PsycINFO,ProQuest, Cochrane Library, Web of Science, and Scopus databases (from the start of each through September 12, 2011) using keywords related to social media and medical education. Two authors independently reviewed the search results to select peer-reviewed, English-language articles discussing social media use in educational interventions at any level of physician training. They assessed study quality using the Medical Education Research Study Quality Instrument. RESULTS: Fourteen studies met inclusion criteria. Interventions using social media tools were associated with improved knowledge (e.g., exam scores),attitudes (e.g., empathy), and skills (e.g., reflective writing). The most commonly reported opportunities related to incorporating social media tools were promoting learner engagement (71% of studies), feedback (57%), and collaboration and professional development (both 36%). The most commonly cited challenges were technical issues (43%), variable learner participation (43%), and privacy/security concerns (29%). Studies were generally of low to moderate quality; there was only one randomized controlled trial. CONCLUSIONS: Social media use in medical education is an emerging field of scholarship that merits further investigation. Educators face challenges in adapting new technologies, but they also have opportunities for innovation.

**PMID: 23619071 [PubMed - in process]**

**8. Acad Med. 2013 Jun;88(6):831-6. doi: 10.1097/ACM.0b013e31828ff92c.**

**Systems-based practice learning opportunities in student-run clinics: aqualitative analysis of student experiences.**

**Sheu L, O'Brien B, O'Sullivan PS, Kwong A, Lai CJ.**

**University of California, San Francisco, School of Medicine, Department ofMedicine and Office of Medical Education, San Francisco, California 94143, USA. leslie.sheu@ucsf.edu**

PURPOSE: Student-run clinics (SRCs) provide preclerkship medical students with systems-based practice (SBP) experiences as they engage in patient care and manage clinic operations. This study explored the types and context of SBP activities students participate in at SRCs.METHOD: Between November 2011 and February 2012, the authors conducted in-depth, semistructured interviews with a purposive sample of medical students who served as volunteers and coordinators (student leadership role) at four independently run SRCs within the University of California, San Francisco, School of Medicine. They also interviewed SRC faculty advisors. Interviews focused on student roles in SRCs, SBP learning opportunities in SRCs, and comparisons of SBP experiences in SRCs with those in the formal preclerkship curriculum. The authors used thematic analysis techniques to code and synthesize data. RESULTS: Data from interviews with 8 volunteers, 14 coordinators, and 4 faculty suggested six major domains related to SBP learning opportunities in SRCs: interprofessional roles and collaboration; clinic organization; patient factors affecting access to care; awareness of the larger health care system and continuity of care; resource acquisition and allocation; and systems improvement. Coordinators, who managed SRCs, demonstrated greater depth of SBP understanding than volunteers, who provided patient care. Students and faculty agreed that SRCs provided students with SBP learning opportunities beyond those available in the formal curriculum. CONCLUSIONS: Preclerkship students' participation in SRCs provides opportunities for in-depth learning of SBP, particularly among students who take on leadership roles. SRCs may model ways to effectively introduce key components of SBP to early medical learners.

**PMID: 23619068 [PubMed - in process]**

**9. Acad Med. 2013 Jun;88(6):802-10. doi: 10.1097/ACM.0b013e31828fd4f4.**

**Enculturation of unsafe attitudes and behaviors: student perceptions of safety culture.**

**Bowman C, Neeman N, Sehgal NL.University of California, Department of Medicine, San Francisco, San Francisco, California 94143, USA.**

PURPOSE: Safety culture may exert an important influence on the adoption and learning of patient safety practices by learners at clinical training sites. This study assessed students' perceptions of safety culture and identified curricular gaps in patient safety training. METHOD: A total of 170 fourth-year medical students at the University of California, San Francisco, were asked to complete a modified version of theAgency for Healthcare Research and Quality Hospital Survey on Patient Safety Culture in 2011. Students responded on the basis of either their third-year internal medicine or surgery clerkship experience. Responses were recorded on a five-point Likert scale. Percent positive responses were compared between the groups using a chi-square test. RESULTS: One hundred twenty-one students (71% response rate) rated "teamwork within units" and "organizational learning" highest among the survey domains; "communication openness" and "nonpunitive response to error" were rated lowest. A majority of students reported that they would not speak up when witnessing a possible adverse event (56%) and were afraid to ask questions if things did not seem right (55%). In addition, 48% of students reported feeling that mistakes were held against them. Overall, students reported a desire for additional patient safety training to enhance their educational experience. CONCLUSIONS: Assessing student perceptions of safety culture highlighted important observations from their clinical experiences and helped identify areas for curricular development to enhance patient safety. This assessment may also be a useful tool for both clerkship directors and clinical service chiefs in their respective efforts to promote safe care.

**PMID: 23619067 [PubMed - in process]**

**10. Acad Med. 2013 Jun;88(6):837-42. doi: 10.1097/ACM.0b013e31828fa773.**

**An arts-based intervention at a nursing home to improve medical students'attitudes toward persons with dementia.**

**George DR, Stuckey HL, Whitehead MM.**

**Department of Humanities, Penn State College of Medicine, Hershey, Pennsylvania 17033, USA. drg21@psu.edu**

PURPOSE: Emerging data suggest that students' attitudes toward older patients may be positively affected by geriatric experiences that are not clinically based, but no known interventions have used creative arts to integrate humanistic experiences into medical student geriatric education. This 2012 study evaluated whether participating in TimeSlips, a creative group-based storytelling program involving persons with dementia, improved medical students' attitudes toward such patients. METHOD: The authors administered the Dementia Attitudes Scale (DAS) to 22fourth-year medical students to evaluate the mean change in their self-reported attitudes toward persons with dementia. The authors used paired t tests or Wilcoxon signed-rank tests to analyze pre- and post-program scores on the individual items of the DAS, on the subdomains of "comfort" and "knowledge," and on the overall scale. They used Cronbach alpha to evaluate the internal consistency and reliability of the "comfort" and "knowledge" subdomains and of the overall scale. RESULTS: Medical students' attitudes, as measured by the significantly higher scores on 12 of the 20 items, on each of the two subdomains, and on the overall scale, showed improvement after the TimeSlips sessions. The DAS showed acceptable to good internal consistency on both subdomains and on the overall scale both pre and post session; however, the internal consistency analysis is preliminary because of small sample size. CONCLUSIONS: The authors' findings provide preliminary evidence that participation in a creative storytelling program at a nursing home improves medical students' attitudes toward persons with dementia and adds to evidence supporting the reliability of the DAS.

**PMID: 23619065 [PubMed - in process]**

**11. Acad Med. 2013 Jun;88(6):884-92. doi: 10.1097/ACM.0b013e31828f898f.**

**Teaching medical error disclosure to physicians-in-training: a scoping review.**

**Stroud L, Wong BM, Hollenberg E, Levinson W.**

**Department of Medicine, University of Toronto Faculty of Medicine, Toronto,Ontario, Canada. lynfa.stroud@sunnybrook.ca**

PURPOSE: This scoping review identified published studies of error disclosure curricula targeting physicians-in-training (residents or medical students).METHOD: In 2011, the authors searched electronic databases (e.g., MEDLINE,EMBASE, ERIC) for eligible studies published between 1960 and July 2011. From the studies that met their inclusion criteria, they extracted and summarized key aspects of each curriculum (e.g., level of learner, program discipline) and educational features (e.g., curriculum design, teaching and assessment methods, and learner outcomes).RESULTS: The authors identified 21 studies that met their inclusion criteria. These studies described 19 error disclosure curricula, which were either a stand-alone educational activity, part of a larger curriculum in patient safety or communication skills, or part of simulation training. Most curricula consisted of a brief, single encounter, combining didactic lectures or small-group discussions with role-play. Fourteen studies described learners' self-reported improvements in knowledge, skills, and attitudes. Five studies used a structured assessment and reported that learners' error disclosure skills improved after completing the curriculum; however, these studies were limited by their small to medium sample size and lack of assessment of skills retention. Attempts to assess the change in learners' error disclosure behavior in the clinical context were limited. CONCLUSIONS: Studies of existing error disclosure curricula demonstrate improvements in learners' knowledge, skills, and attitudes. A greater emphasis is needed on the more rigorous assessment of skills acquisition and behavior change to determine whether formal training leads to long-term effects on learner outcomes that translate into real-world clinical practice.

**PMID: 23619064 [PubMed - in process]**

 **12. Med Teach. 2013 Jun;35(6):e1197-210. doi: 10.3109/0142159X.2013.788789. Epub 2013 May 16.**

**Frameworks for learner assessment in medicine: AMEE Guide No. 78.**

**Pangaro L, ten Cate O.**

**Department of Medicine, F. Edward Hebert School of Medicine, Uniformed Services University of the HealthSciences, 4301 Jones Bridge Road, Bethesda, MD 20814-4799, USA. louispangaro@aol.com**

In any evaluation system of medical trainees there is an underlying set of assumptions about what is to be evaluated (i.e., which goals reflect the values of the system or institution), what kind of observations or assessments are useful to allow judgments 1 ; and how these are to be analyzed and compared to a standard of what is to be achieved by the learner. These assumptions can be conventionalized into a framework for evaluation. Frameworks encompass, or "frame," a group of ideas or categories to reflect the educational goals against which a trainee's level of competence or progress is gauged. Different frameworks provide different ways of looking at the practice of medicine and have different purposes. In the first place, frameworks should enable educators to determine to what extent trainees are ready for advancement, that is, whether the desired competence has been attained. They should provide both a valid mental model of competence and also terms to describe successful performance, either at the end of training or as milestones during the curriculum. Consequently, such frameworks drive learning by providing learners with a guide for what is expected. Frameworks should also enhance consistency and reliability of ratings across staff and settings. Finally, they determine the content of, and resources needed for, rater training to achieve consistency of use. This is especially important in clinical rotations, in which reliable assessments have been most difficult to achieve. Because the limitations of workplace-based assessment have persisted despite the use of traditional frameworks (such as those based on knowledge, skills, and attitudes), this Guide will explore the assumptions and characteristics of traditional and newer frameworks. In this AMEE Guide, we make a distinction between analytic, synthetic, and developmental frameworks. Analytic frameworks deconstruct competence into individual pieces, to evaluate each separately. Synthetic frameworks attempt to view competence holistically, focusing evaluation on the performance in real-world activities. Developmental frameworks focus on stages of, or milestones, in the progression toward competence. Most frameworks have one predominant perspective; some have a hybrid nature.

**PMID: 23676179 [PubMed - in process]**

**13. Med Teach. 2013 Jun;35(6):503-14. doi: 10.3109/0142159X.2013.774330. Epub 2013 Mar 22.**

**Is the OSCE a feasible tool to assess competencies in undergraduate medical education?**

**Patrício MF, Julião M, Fareleira F, Carneiro AV.**

**Institute of Introduction to Medicine, Centre for Evidence Based Medicine, Faculty of Medicine,University of Lisbon, Av. Prof. Egas Moniz, Lisbon, Portugal. patricio@fm.ul.pt**

BACKGROUND: The Objective Structured Clinical Examination (OSCE) was introduced by Harden et al. (1975) trying to answer the problems regarding the assessment of clinical competencies. Despite increasingly widespread use of OSCEs, debate continues with arguments as 'why using such a demanding format if other methods are available?' AIM: To review and synthesize evidence on technical and economic feasibility of OSCE in undergraduate medical studies. METHODS: Best Evidence Medical Education methodology was applied by two independent coders to 1083 studies identified by literature search from 1975until the end of 2008.KEY FINDINGS: The OSCE is a feasible approach to the assessment of clinical competence for use in different cultural and geographical contexts; to assess a wide range of learning outcomes; in different specialties and disciplines; for formative and summative purposes; to assess students a curriculum or an educational intervention; in the different phases of education including the early and later years of the undergraduate curriculum; and in different health care professions. CONCLUSION: Despite being an expensive test format, evidence suggests that the use of OSCE produces reliable results. The study also suggests that one reason for the wide-scale adoption of the OSCE and the feasibility of its use in different contexts and situations is its inherent flexibility in terms of the number of students that can be assessed, the number of examiners included, the type of patients represented and the format of the examination itself, including the length of the examination, the number and duration of stations.

**PMID: 23521582 [PubMed - in process]**

**14. Med Teach. 2013 Jun;35(6):433-43. doi: 10.3109/0142159X.2013.775413. Epub 2013 Mar 15.**

**Enhancing learning approaches: practical tips for students and teachers.Azer SA, Guerrero AP, Walsh A.**

**Department of Medical Education, College of Medicine, King Saud University,Riyadh, Saudi Arabia. azer2000@optusnet.com.au**

BACKGROUND: In an integrated curriculum such as problem-based learning (PBL),students need to develop a number of learning skills and competencies. These cannot be achieved through memorization of factual knowledge but rather through the development of a wide range of cognitive and noncognitive skills that enhance deep learning. AIM: The aim of this article is to provide students and teachers with learning approaches and learning strategies that enhance deep learning. METHODS: We reviewed current literature in this area, explored current theories of learning, and used our experience with medical students in a number of universities to develop these tips. RESULTS: Incorporating the methods described, we have developed 12 tips and organized them under three themes. These tips are (1) learn how to ask good questions, (2) use analogy, (3) construct mechanisms and concept maps, (4) join a peer-tutoring group, (5) develop critical thinking skills, (6) useself-reflection, (7) use appropriate range of learning resources, (8) ask for feedback, (9) apply knowledge learnt to new problems, (10) practice learning by using simulation, (11) learn by doing and service learning, and (12) learn from patients. CONCLUSIONS: Practicing each of these approaches by students and teachers and applying them in day-to-day learning/teaching activities are recommended for optimum performance.

**PMID: 23496121 [PubMed - in process]**

**15. Med Teach. 2013 Jun;35(6):515-7. doi: 10.3109/0142159X.2013.775415. Epub 2013 Mar 15.**

**Longitudinal interrelationships of OSCE station level analyses, qualityimprovement and overall reliability.**

**Fuller R, Homer M, Pell G.**

**Leeds Institute of Medical Education, University of Leeds, UK.R.Fuller@leeds.ac.uk**

Objective Structured Clinical Examinations (OSCEs) are a key component within many healthcare assessment programmes. Quality assurance is designed to ensure rigour and credibility in decision making for both candidates and institutions, and most commonly expressed by a single measure of reliability. How overall reliability interrelates with OSCE station level analyses is less well established, especially with respect to the impact of quality improvements. This work examined longitudinal interrelationships of reliability and station level metrics alongside interventions to improve the OSCE, revealing an anticipated relationship between poor reliability and poor station level analyses. However, longitudinal profiling revealed that overall reliability proved relatively unresponsive to continued improvements across stations - highlighting the importance of station level analyses as a routine part of any assessment quality assurance.

**PMID: 23496119 [PubMed - in process]**

**16. Med Teach. 2013 Jun;35(6):465-71. doi: 10.3109/0142159X.2013.774335. Epub 2013 Mar 12.**

**Patient views of continuity relationships with medical students.**

**Poncelet AN, Wamsley M, Hauer KE, Lai C, Becker T, O'Brien B.University of California-San Francisco, CA 94143, USA. ann.poncelet@ucsf.edu**

Introduction: Continuity relationships between students and patients, that occur in a longitudinal integrated clerkship (LIC), enrich medical students' opportunities to learn from patients and provide patient-centered care. Patient preferences for continuity with a primary provider are well-documented, but little is known about patients' experiences of continuity with students. This study examines patients' perception of continuity with and care received by students. Methods: This qualitative study uses data from semi-structured interviews with 32 patients of LIC students at an academic medical center. Data were analyzed for themes about continuity and experiences of care provided by students. Results: Patients valued relationships with students over time and across settings. Students' contributions to their care included enhanced access to and coordination of care, communication, patient education and wellbeing. Patients with substantial continuity and/or who were moderately or severely ill described their student in a physician-like role more frequently than other patients. Patients appreciated patient-centered attitudes and behaviors in their students. Conclusion: Patients value continuity relationships with students, akin to that described between patients and their physicians. Patients described a variety of ways in which students enhanced their care and assumed a physician-like role. These patient perceptions support the concept of mutually beneficial relationships between students and patients.

**PMID: 23477473 [PubMed - in process]**

**17. Med Teach. 2013 Jun;35(6):e1218-29. doi: 10.3109/0142159X.2012.742493. Epub 2012 Dec 11.**

 **Effects of the use of differential diagnosis checklist and general de-biasing checklist on diagnostic performance in comparison to intuitive diagnosis.**

**Shimizu T, Matsumoto K, Tokuda Y.**

**Nerima Hikarigaoka Hospital, Japan.**

BACKGROUND: How clinicians conduct diagnostic reasoning is a major issue. AIM: To evaluate whether intuitive and analytic processes (differential diagnosis checklist, DDXC; general de-biasing checklist, GDBC) might improve diagnostic performance. METHODS: We enrolled 188 medical students (4th-6th grades) who were divided into two groups and assigned the five cases scenarios. Group 1 (n = 91) were instructed to provide the three most likely diagnoses immediately after reading the scenarios (intuitive diagnosis), then after reading GDBC (diagnosis by GDBC), and finally, after reading DDXC (diagnosis by DDXC). Conversely, group 2 (n = 97) were instructed to provide intuitive diagnoses, by DDXC, and by GDBC. RESULTs: Among the group 1, there was significant difference of total scores (p = 0.01 by ANOVA) between intuitive (8.25) and DDXC (8.77). Among the group 2, we noted significant difference of total scores (p = 0.001 by ANOVA) between intuitive (7.21) and DDXC (7.96). Among the difficult cases, the proportions of correct diagnosis increased after reading DDXC, although among the simple cases, the proportions of correct diagnosis decreased after reading DDXC.CONCLUSION: The use of DDXC, not GDBC, may improve the diagnostic performance in difficult cases, while intuitive process may still be better for simpler cases.

**PMID: 23228085 [PubMed - in process]**

**18. Med Teach. 2013 Jun;35(6):444-53. doi: 10.3109/0142159X.2012.737968. Epub 2012 Dec 11.**

**A scoping review of undergraduate ambulatory care education.**

**Williams CK, Hui Y, Borschel D, Carnahan H.**

**Graduate Department of Rehabilitation Science, University of Toronto, 200Elizabeth Street, Toronto,Ontario, Canada. camille.williams@utoronto.ca**

BACKGROUND: Since a disproportionate amount of medical education still occurs in hospitals, there are concerns that medical school graduates are not fully prepared to deliver efficient and effective care in ambulatory settings to increasingly complex patients.AIMS: To understand the current extent of scholarship in this area. METHOD: A scoping review was conducted by searching electronic databases and grey literature sources for articles published between 2001 and 2011 that identified key challenges and models of practice for undergraduate teaching of ambulatory care. Relevant articles were charted and assigned key descriptors, which were mapped onto Canadian recommendations for the future of undergraduate medical education. RESULTS: Most of the relevant articles originated in the United States, Australia, or the United Kingdom. Recommendations related to faculty development, learning contexts and addressing community needs had numerous areas of scholarly activity while scholarly activity was lacking for recommendations related to inter-professional practice, the use of technology, preventive medicine, and medical leadership. CONCLUSIONS: Systems should be established to support education and research collaboration between medical schools to develop best practices and build capacity for change. This method of scoping the field can be applied using best practices and recommendations in other countries.

**PMID: 23228083 [PubMed - in process]**

**19. Med Teach. 2013 Jun;35(6):e1211-7. doi: 10.3109/0142159X.2012.737962. Epub 2012 Nov 12.**

**Academic dishonesty and ethical reasoning: pharmacy and medical school students in New Zealand.**

**Henning MA, Ram S, Malpas P, Shulruf B, Kelly F, Hawken SJ.**

**Centre for Medical and Health Sciences Education, University of Auckland,Auckland 1142, New Zealand. m.henning@auckland.ac.nz**

BACKGROUND: There is ample evidence to suggest that academic dishonesty remains an area of concern and interest for academic and professional bodies. There is also burgeoning research in the area of moral reasoning and its relevance to the teaching of pharmacy and medicine. AIMS: To explore the associations between self-reported incidence of academic dishonesty and ethical reasoning in a professional student body. METHODS: Responses were elicited from 433 pharmacy and medicine students. A questionnaire eliciting responses about academic dishonesty (copying, cheating, and collusion) and their decisions regarding an ethical dilemma was distributed. Multivariate analysis procedures were conducted. RESULTS: The findings suggested that copying and collusion may be linked to the way students make ethical decisions. Students more likely to suggest unlawful solutions to the ethical dilemma were more likely to disclose engagement in copying information and colluding with other students. CONCLUSIONS: These findings imply that students engaging in academic dishonesty may be using different ethical frameworks. Therefore, employing ethical dilemmas would likely create a useful learning framework for identifying students employing dishonest strategies when coping with their studies. Increasing understanding through dialog about engagement in academic honesty will likely construct positive learning outcomes in the university with implications for future practice.

**PMID: 23146078 [PubMed - in process]**

**20. Med Teach. 2013 Jun;35(6):526-8. doi: 10.3109/0142159X.2013.808923.**

**Cheating and the new moral compass.**

**Ellaway R.**

**Northern Ontario School of Medicine, Canada.PMID: 23705656 [PubMed - in process]**

**21. Med Educ. 2013 Jun;47(6):585-94. doi: 10.1111/medu.12150.**

**Beyond individualism: professional culture and its influence on feedback.**

**Watling C, Driessen E, van der Vleuten CP, Vanstone M, Lingard L.Department of Clinical Neurological Sciences, Schulich School of Medicine andDentistry, University of Western Ontario, London, Ontario, Canada.chris.watling@schulich.uwo.ca**

CONTEXT: Although feedback is widely considered essential to learning, its actual influence on learners is variable. Research on responsivity to feedback has tended to focus on individual rather than social or cultural influences on learning. In this study, we explored how feedback is handled within different professional cultures, and how the characteristics and values of a profession shape learners' responses to feedback. METHODS: Using a constructivist grounded theory approach, we conducted 12 focus groups and nine individual interviews (with a total of 50 participants) across three cultures of professional training in, respectively, music, teacher training and medicine. Constant comparative analysis for recurring themes was conducted iteratively. RESULTS: Each of the three professional cultures created a distinct context for learning that influenced how feedback was handled. Despite these contextual differences, credibility and constructiveness emerged as critical constants, identified by learners across cultures as essential for feedback to be perceived as meaningful. However, the definitions of credibility and constructiveness were distinct to each professional culture and the cultures varied considerably in how effectively they supported the occurrence of feedback with these critical characteristics. CONCLUSIONS: Professions define credibility and constructiveness in culturally specific ways and create contexts for learning that may either facilitate or constrain the provision of meaningful feedback. Comparison with other professional cultures may offer strategies for creating a productive feedback culture within medical education.

**PMID: 23662876 [PubMed - in process]**

**22. Med Educ. 2013 Jun;47(6):569-77. doi: 10.1111/medu.12136.**

**Advancing the objective structured clinical examination: sequential testing in theory and practice.**

**Pell G, Fuller R, Homer M, Roberts T.**

**Leeds Institute of Medical Education, School of Medicine, University of Leeds,Leeds, UK. g.pell@leeds.ac.uk**

CONTEXT: Models of short-term remediation for failing students are typically associated with improvements in candidate performance at retest. However, the process is costly to deliver, particularly for performance retests with objective structured clinical examinations (OSCEs), and there is increasing evidence that these traditional models are associated with the longitudinal underperformance of candidates. METHODS: Rather than a traditional OSCE model, sequential testing involves ashorter 'screening' format, with an additional 'sequential' test for candidates who fail to meet the screening standard. For those tested twice, overall pass/fail decisions are then based on results on the full sequence of tests. In this study, the impacts of sequential assessment on student performance, cost of assessment delivery and overall reliability were modelled using data sourced from a final graduating OSCE in an undergraduate medical degree programme. RESULTS: Initial modelling using pre-existing OSCE data predicted significant improvements in reliability in the critical area, reflected in pilot results:13.5% of students (n = 228) were required to sit the sequential OSCE. One student (0.4%) was identified as representing a false positive result (i.e. under the previous system this student would have passed the OSCE but failed on extended testing). Nine students (3.9%) who would have required OSCE retests under the prior system passed the full sequence and were therefore able to graduate at the normal time without loss of earnings. Overall reliability was estimated as 0.79 for the full test sequence. Significant cost savings were realised. CONCLUSIONS: Sequential testing in OSCEs increases reliability for borderline students because the increased number of observations implies that 'observed' student marks are closer to 'true' marks. However, the station-level quality of the assessment needs to be sufficiently high for the full benefits in terms of reliability to be achieved. The introduction of such a system has financial benefits, good validity inferences and has proved acceptable to students and other stakeholders.

**PMID: 23662874 [PubMed - in** **process]**

**May, 2013 Journal Watch PubMed Results**

**1. Acad Med. 2013 May;88(5):737. doi: 10.1097/ACM.0b013e31828abf7f.AM last page.**

**The MCAT exam: comparing the 1991 and 2015 exams.**

**Kroopnick M.**

**MCAT 2015 Development and Psychometrics, Association of American Medical Colleges (AAMC), USA. mkroopnick@aamc.org**

**PMID: 23611976** [PubMed - indexed for MEDLINE]

**2. Acad Med. 2013 May;88(5):556. doi: 10.1097/ACM.0b013e31828a0c24.**

**A call for management and economic training in medical education.**

**Wu C, Derman P.**

**PMID: 23611963 [PubMed - indexed for MEDLINE]**

**3. Acad Med. 2013 May;88(5):560-7. doi: 10.1097/ACM.0b013e31828c4ae0.**

**Redesigning the MCAT exam: balancing multiple perspectives.**

**Schwartzstein RM, Rosenfeld GC, Hilborn R, Oyewole SH, Mitchell K.**

The authors of this commentary discuss the recently completed review of the current Medical College Admission Test (MCAT), which has been used since 1991,and describe the blueprint for the new test that will be introduced in 2015. The design of the MCAT exam reflects changes in medical education, medical science, health care delivery, and the needs of the populations served by graduates of U.S. and Canadian medical schools. The authors describe how balancing the ambitious goals for the new exam and the varying priorities of the testing program's many stakeholders made blueprint design complex. They discuss the tensions and trade-offs that characterized the design process as well as the deliberations and data that shaped the blueprint. The blueprint for the MCAT exam balances the assessment of a broad range of competencies in the natural, social, and behavioral sciences and critical analysis and reasoning skills that are essential to entering students' success in medical school. The exam will include four sections: Biological and Biochemical Foundations of Living Systems; Chemical and Physical Foundations of Biological Systems; Psychological, Social, and Biological Foundations of Behavior; and Critical Analysis and Reasoning Skills. The authors also offer recommendations for admission committees, advising them to review applicants' test scores, course work, and other academic, personal, and experiential credentials as part of a holistic admission process and in relation to their institutions' educational, scientific, clinical, and service-oriented goals.

**PMID: 23524933 [PubMed - indexed for MEDLINE]**

**4. Acad Med. 2013 May;88(5):553-4. doi: 10.1097/ACM.0b013e31828b7c8f.**

**Preparation for medical school: reflections on the MCAT exam, premedicaleducation, and the medical school application process.**

**Sklar DP.**

**PMID: 23524932 [PubMed - indexed for MEDLINE]**

**5. Acad Med. 2013 May;88(5):603-13. doi: 10.1097/ACM.0b013e31828b3389.**

**Core personal competencies important to entering students' success in medical school: what are they and how could they be assessed early in the admission process?**

**Koenig TW, Parrish SK, Terregino CA, Williams JP, Dunleavy DM, Volsch JM. Johns Hopkins University School of Medicine, Baltimore, Maryland, USA.**

Assessing applicants' personal competencies in the admission process has proven difficult because there is not an agreed-on set of personal competencies for entering medical students. In addition, there are questions about the measurement properties and costs of currently available assessment tools. The Association of American Medical College's Innovation Lab Working Group (ILWG) and Admissions Initiative therefore engaged in a multistep, multiyear process to identify personal competencies important to entering students' success in medical school as well as ways to measure them early in the admission process. To identify core personal competencies, they conducted literature reviews, surveyed U.S and Canadian medical school admission officers, and solicited input from the admission community. To identify tools with the potential to provide data in time for pre-interview screening, they reviewed the higher education and employment literature and evaluated tools' psychometric properties, group differences, risk of coaching/faking, likely applicant and admission officer reactions, costs, and scalability. This process resulted in a list of nine core personal competencies rated by stakeholders as very or extremely important for entering medical students: ethical responsibility to self and others; reliability and dependability; service orientation; social skills; capacity for improvement; resilience and adaptability; cultural competence; oral communication; and teamwork. The ILWG's research suggests that some tools hold promise for assessing personal competencies, but the authors caution that none are perfect for all situations. They recommend that multiple tools be used to evaluate information about applicants' personal competencies in deciding whom to interview.

**PMID: 23524928 [PubMed - indexed for MEDLINE]**

**6. Acad Med. 2013 May;88(5):693-8. doi: 10.1097/ACM.0b013e31828b2df1.**

**The relationship between communication scores from the USMLE Step 2 Clinical Skills examination and communication ratings for first-year internal medicine residents.**

**Winward ML, Lipner RS, Johnston MM, Cuddy MM, Clauser BE.**

**National Board of Medical Examiners, Philadelphia, Pennsylvania 19104, USA.mwinward@nbme.org**

PURPOSE: This study extends available evidence about the relationship between scores on the Step 2 Clinical Skills (CS) component of the United States Medical Licensing Examination and subsequent performance in residency. It focuses on the relationship between Step 2 CS communication and interpersonal skills scores and communication skills ratings that residency directors assign to residents in their first postgraduate year of internal medicine training. It represents the first large-scale evaluation of the extent to which Step 2 CS communication and interpersonal skills scores can be extrapolated to examinee performance in supervised practice. METHOD: Hierarchical linear modeling techniques were used to examine the relationships among examinee characteristics, residency program characteristics, and residency-director-provided ratings. The sample comprised 6,306 examinees from 238 internal medicine residency programs who completed Step 2 CS for the first time in 2005 and received ratings during their first year of internal medicine residency training. RESULTS: Although the relationship is modest, Step 2 CS communication and interpersonal skills scores predict communication skills ratings for first-year internal medicine residents after accounting for other factors. CONCLUSIONS: The results of this study make a reasonable case that Step 2 CS communication and interpersonal skills scores provide useful information for predicting the level of communication skill that examinees will display in their first year of internal medicine residency training. This finding demonstrates some level of extrapolation from the testing context to behavior in supervised practice, thus providing validity-related evidence for using Step 2 CS communication and interpersonal skills scores in high-stakes decisions.

**PMID: 23524927 [PubMed - indexed for MEDLINE]**

**7. Acad Med. 2013 May;88(5):682-7. doi: 10.1097/ACM.0b013e31828b0007.**

**Competence and confidence with basic procedural skills: the experience and opinions of fourth-year medical students at a single institution.**

**Dehmer JJ, Amos KD, Farrell TM, Meyer AA, Newton WP, Meyers MO.**

**Department of Surgery, University of North Carolina at Chapel Hill School ofMedicine, Chapel Hill, North Carolina 28599-7213, USA.**

PURPOSE: Data indicate that students are unprepared to perform basic medical procedures on graduation. The authors' aim was to characterize graduating students' experience with and opinions about these skills. METHOD: In 2011, an online survey queried 156 fourth-year medical students about their experience with, and actual and desired levels of competence for, nine procedural skills (Foley catheter insertion, nasogastric tube insertion, venipuncture, intravenous catheter insertion, arterial puncture, basic suturing, endotracheal intubation, lumbar puncture, and thoracentesis). Students self-reported competence on a four-point Likert scale (4=independently performs skill; 1=unable to perform skill). Data were analyzed by analysis of variance and Student t test. A five-point Likert scale was used to assess student confidence. RESULTS: One hundred thirty-four (86%) students responded. Two skills were performed more than two times by over 50% of students: Foley catheter insertion and suturing. Mean level of competence ranged from 3.13±0.75 (Foley catheter insertion) to 1.7±0.7 (thoracentesis). A gap in desired versus actual level of competence existed for all procedures (P<.0001). There was a correlation between the number of times a procedure had been performed and self-reported competence for all skills except arterial puncture and suturing. CONCLUSIONS: Participants had performed most skills infrequently and rated themselves as being unable to perform them without assistance. Strategies to improve student experience and competence of procedural skills must evolve to improve the technical competency of graduating students because their current competency varies widely.

**PMID: 23524922 [PubMed - indexed for MEDLINE]**

**8. Acad Med. 2013 May;88(5):688-92. doi: 10.1097/ACM.0b013e31828af039.**

**Within-session score gains for repeat examinees on a standardized patientexamination.**

**Chavez AK, Swygert KA, Peitzman SJ, Raymond MR.**

**National Board of Medical Examiners, Philadelphia, Pennsylvania 19104, USA.**

PURPOSE: Previous studies on standardized patient (SP) exams reported score gains both across attempts when examinees failed and retook the exam and over multiple SP encounters within a single exam session. The authors analyzed the within-session score gains of examinees who repeated the United States Medical Licensing Examination Step 2 Clinical Skills to answer two questions: How much do scores increase within a session? Can the pattern of increasing first-attempt scores account for across-session score gains? METHOD: Data included encounter-level scores for 2,165 U.S. and Canadian medical students and graduates who took Step 2 Clinical Skills twice between April 1, 2005 and December 31, 2010. The authors modeled examinees' score patterns using smoothing and regression techniques and applied statistical tests to determine whether the patterns were the same or different across attempts. In addition, they tested whether any across-session score gains could be explained by the first-attempt within-session score trajectory. RESULTS: For the first and second attempts, the authors attributed examinees' within-session score gains to a pattern of score increases over the first three to six SP encounters followed by a leveling off. Model predictions revealed that the authors could not attribute the across-session score gains to the first-attempt within-session score gains. CONCLUSIONS: The within-session score gains over the first three to six SP encounters of both attempts indicate that there is a temporary "warm-up" effect on performance that "resets" between attempts. Across-session gains are not due to this warm-up effect and likely reflect true improvement in performance.

**PMID: 23524920 [PubMed - indexed for MEDLINE]**

**9. Acad Med. 2013 May;88(5):626-37. doi: 10.1097/ACM.0b013e31828acf27.**

**Teaching population health: a competency map approach to education.**

**Kaprielian VS, Silberberg M, McDonald MA, Koo D, Hull SK, Murphy G, Tran AN,Sheline BL, Halstater B, Martinez-Bianchi V, Weigle NJ, de Oliveira JS, SangvaiD, Copeland J, Tilson HH, Scutchfield FD, Michener JL.**

**Department of Community and Family Medicine, Duke University School of Medicine, Durham, North Carolina, USA. kaprielianv@campbell.eduA**

2012 Institute of Medicine report is the latest in the growing number of calls to incorporate a population health approach in health professionals' training. Over the last decade, Duke University, particularly its Department of Community and Family Medicine, has been heavily involved with community partners in Durham, North Carolina, to improve the local community's health. On the basis of these initiatives, a group of interprofessional faculty began tackling the need to fill the curriculum gap to train future health professionals in public health practice, community engagement, critical thinking, and team skills to improve population health effectively in Durham and elsewhere. The Department of Community and Family Medicine has spent years in care delivery redesign and curriculum experimentation, design, and evaluation to distinguish the skills trainees and faculty need for population health improvement and to integrate them into educational programs. These clinical and educational experiences have led to a set of competencies that form an organizational framework for curricular planning and training. This framework delineates which learning objectives are appropriate and necessary for each learning level, from novice through expert, across multiple disciplines and domains. The resulting competency map has guided Duke's efforts to develop, implement, and assess training in population health for learners and faculty. In this article, the authors describe the competency map development process as well as examples of its application and evaluation at Duke and limitations to its use with the hope that other institutions will apply it in different settings.

**PMCID: PMC3636155 [Available on 2014/5/1]PMID: 23524919 [PubMed - indexed for MEDLINE]**

**10. Acad Med. 2013 May;88(5):672-81. doi: 10.1097/ACM.0b013e31828bf252.**

**An overview of the medical school admission process and use of applicant data in decision making: what has changed since the 1980s?**

**Monroe A, Quinn E, Samuelson W, Dunleavy DM, Dowd KW.**

**Educational Affairs, University of South Florida Health Morsani College ofMedicine, Tampa, Florida, USA.**

PURPOSE: To investigate current medical school admission processes and whether they differ from those in 1986 when they were last reviewed by the Association of American Medical Colleges (AAMC).METHOD: In spring 2008, admission deans from all MD-granting U.S. and Canadian medical schools using the Medical College Admission Test (MCAT) were invited to complete an online survey that asked participants to describe their institution's admission process and to report the use and rate the importance of applicant data in making decisions at each stage. RESULTS: The 120 responding admission officers reported using a variety of data to make decisions. Most indicated using interviews to assess applicants' personal characteristics. Compared with 1986, there was an increase in the emphasis placed on academic data during pre-interview screening. While GPA data were among the most important data in decision making at all stages in 1986, data use and importance varied by the stage of the process in 2008: MCAT scores and undergraduate GPAs were rated as the most important data for deciding whom to invite to submit secondary applications and interview, whereas interview recommendations and letters of recommendation were rated as the most important data in deciding whom to accept. CONCLUSIONS: This study underscores the complexity of the medical school admission process and suggests increased use of a holistic approach that considers the whole applicant when making admission decisions. Findings will inform AAMC initiatives focused on transforming admission processes.

**PMID: 23524917 [PubMed - indexed for MEDLINE]**

**11. Acad Med. 2013 May;88(5):666-71. doi: 10.1097/ACM.0b013e3182864299.**

**The predictive validity of the MCAT exam in relation to academic performancethrough medical school: a national cohort study of 2001-2004 matriculants.**

**Dunleavy DM, Kroopnick MH, Dowd KW, Searcy CA, Zhao X.**

**Admissions Research, Association of American Medical Colleges, Washington, DC20037, USA. ddunleavy@aamc.org**

PURPOSE: Most research examining the predictive validity of the Medical College Admission Test (MCAT) has focused on the relationship between MCAT scores and scores on the United States Medical Licensing Examination Step exams. This study examined whether MCAT scores predict students' unimpeded progress toward graduation (UP), which the authors defined as not withdrawing or being dismissed for academic reasons, graduating within five years of matriculation, and passing the Step 1, Step 2 Clinical Knowledge, and Step 2 Clinical Skills exams on the first attempt. METHOD: Students who matriculated during 2001-2004 at 119 U.S. medical schools were included in the analyses. Logistic regression analyses were used to estimate the relationships between UP and MCAT total scores alone, undergraduate grade point averages (UGPAs) alone, and UGPAs and MCAT total scores together. All analyses were conducted at the school level and were considered together to evaluate relationships across schools. RESULTS: The majority of matriculants experienced UP. Together, UGPAs and MCAT total scores predicted UP well. MCAT total scores alone were a better predictor than UGPAs alone. Relationships were similar across schools; however, there was more variability across schools in the relationship between UP and UGPAs than between UP and MCAT total scores. CONCLUSIONS: The combination of UGPAs and MCAT total scores performs well as a predictor of UP. Both UGPAs and MCAT total scores are strong predictors of academic performance in medical school through graduation, not just the first two years. Further, these relationships generalize across medical schools.

**PMID: 23478635 [PubMed - indexed for MEDLINE]**

**12. Med Teach. 2013 May;35(5):422. doi: 10.3109/0142159X.2012.737969. Epub 2013 Apr 22.**

**Resident perceptions regarding teaching medical students.**

**Almasri H, Moza A, Kayyali A, Khuder S, Assaly R.**

**PMID: 23600669 [PubMed - in process]**

**13. Med Teach. 2013 May;35(5):352-8. doi: 10.3109/0142159X.2013.770453. Epub 2013 Apr 18.**

**Laying the foundation: teaching policy and advocacy to medical trainees.**

**Martin D, Hum S, Han M, Whitehead C.Department of Family and Community Medicine, University of Toronto, USA.docdaniellemartin@gmail.comComment in Med Teach. 2013 May;35(5):341-2.**

BACKGROUND: A novel and comprehensive two-year health policy curriculum was developed and implemented for family medicine residents at two University of Toronto-affiliated teaching sites. AIM: To evaluate the impact of the curriculum on residents' knowledge of health policy issues, and its usefulness to their learning. METHOD: The evaluation included a pre-post delivery assessment of residents' content-based knowledge of issues in the Canadian healthcare system. Residents were also asked to evaluate the content, process and usefulness of the health policy curriculum. RESULTS: At the end, more than two-thirds of residents had a better understanding of the Canadian healthcare system. The overall pre-post scores showed that residents retained content-based facts in some detail. However, more importantly, residents' positive evaluations of the curriculum indicated they were engaged, enthusiastic and recognized its importance for their learning. CONCLUSION: Despite residents' positive evaluations, questions remain as to how best to assess the success of health policy curricula. Moving beyond the popular pre-post test, less traditional approaches might complement standard program evaluation methods in future. As educators increasingly develop curricula aimed at non-biomedical expertise, we must consider how we can most meaningfully evaluate long-term impact on graduates' approach to clinical practice and their engagement in health system advocacy.

**PMID: 23597241 [PubMed - in process]**

**14. Med Teach. 2013 May;35(5):388-94. doi: 10.3109/0142159X.2013.769673. Epub 2013 Mar 4.**

**Burnout and career choice motivation in medical students.**

**Pagnin D, De Queiroz V, De Oliveira Filho MA, Gonzalez NV, Salgado AE, Cordeiro e Oliveira B, Lodi CS, Melo RM.**

**Department of Psychiatry and Mental Health, Institute of Community Health,Fluminense Federal University, Brazil. pagnin@huap.uff.br**

BACKGROUND: Burnout is a stress-induced syndrome, which affects medical students. Some environmental and personal factors can favor burnout onset and its serious consequences as dropping out, sleep disorders, depression, and suicide. The motivation for choosing medicine is a personal aspect that can modulate the distress with academic demands. METHODS: We applied self-administered questionnaires in 277 medical students to investigate the predictive role of career choice motivations on burnout dimensions. Specifically, we studied the influence of the main reasons for choosing medicine on emotional exhaustion, cynicism, and academic efficacy. RESULTS: Intellectual curiosity, professional autonomy, altruism, and interest inhuman relationships were the most common reasons for choosing medicine. However, the medical students motivated by personal illness or family member's illness or death revealed a significant greater emotional exhaustion when compared with the students with other motivations. CONCLUSION: The students who apply for medical school motivated by illness/death experiences are at a great risk for burnout. We suggest that students who are at risk for emotional exhaustion can be identified at the admission of medical school. Primary prevention strategies for burnout should consider this riskgroup.

**PMID: 23458255 [PubMed - in process]**

**15. Med Teach. 2013 May;35(5):395-403. doi: 10.3109/0142159X.2013.769677. Epub 2013 Feb 27.**

**Evidence-based competencies for improving communication skills in graduate medical education: a review with suggestions for implementation.**

**Henry SG, Holmboe ES, Frankel RM.**

**Division of General Medicine, Geriatrics, and Bioethics, University of CaliforniaDavis School of Medicine, Sacramento, CA 95817, USA. sghenry@ucdavis.edu**

Communicating with patients is arguably the most common and important activity in medical practice, but this activity receives relatively little emphasis in graduate medical education. We propose 12 evidence-based communication competencies that program directors can adopt as a framework for teaching and evaluating residents' communication skills. We review supporting evidence for these competencies and argue that communication should be treated like a procedural skill that must be taught and evaluated by observing real resident-patient interactions. We make practical suggestions for implementing these competencies by addressing three critical components of a competency-based approach to communication skills: patient safety, faculty development, and direct observation of residents. This approach to teaching and assessing communication skills provides a rationale for incorporating routine direct observation into graduate medical education programs and also for designing communication skills training that ensures graduating residents develop the skills needed to provide safe, effective patient care.

**PMID: 23444891 [PubMed - in process]**

**16. Med Teach. 2013 May;35(5):348-51. doi: 10.3109/0142159X.2013.769676. Epub 2013 Feb 27.**

**Twelve tips for making the best use of feedback.**

**van der Leeuw RM, Slootweg IA.University of Amsterdam, The Netherlands. r.m.vanderleeuw@amc.nl**

BACKGROUND: Feedback is generally regarded as crucial for learning. We focus on feedback provided through instruments developed to inform self-assessment and support learners to improve performance. These instruments are being used commonly in medical education, but they are ineffective if the feedback is not well received and put into practice. METHODS: The authors formulated twelve tips to make the best use of feedback based on widely cited publications on feedback. To include recent developments and hands-on experiences in the field of medical education, the authors discussed the tips with their research team consisting of experts in the field of medical education and professional performance, to reach agreement on the most practical strategies. RESULTS: When utilizing feedback for performance improvement, medical students, interns, residents, clinical teachers and practicing physicians could make use of the twelve tips to put feedback into practice. The twelve tips provide strategies to reflect, interact and respond to feedback one receives through (validated) feedback instruments. CONCLUSIONS: Since the goal of those involved in medical education and patient care is to perform at the highest possible level, we offer twelve practical tips for making the best use of feedback in order to support learners of all levels.

PMID: 23444890 [PubMed - in process]

**17. Med Teach. 2013 May;35(5):404-10. doi: 10.3109/0142159X.2013.769675. Epub 2013 Feb 27.**

**Relationship between academic performance and affective changes during the first year at medical school.**

**Del-Ben CM, Machado VF, Madisson MM, Resende TL, Valério FP, Troncon LE.**

**Departamento de Neurociências e Ciências do Comportamento, Faculdade de Medicina de Ribeirão Preto, University of São Paulo, Brazil. delben@fmrp.usp.br**

BACKGROUND: Entering medical school may be associated with changes in the students' life, which can affect academic motivation and impair academic performance. AIMS: This work aimed at measuring longitudinally academic motivation, anxiety, depression and social adjustment in first-year medical students and determining the relationships between these variables and academic performance, as measured mainly by grades on regular exams. METHODS: Eighty-five first-year medical students (age: 17-25 years) were included after giving informed consent. Beck's Anxiety (BAI) and Beck's Depression (BDI) Inventories, the self-reported Social Adjustment Scale (SAS-SR) and the Academic Motivation Scale (AMS) were applied two months after admission and at the end of the academic year. RESULTS: BAI scores increased throughout the year (7.3 ± 6.6 versus 28.8 ± 6.7; p < 0.001), whereas BDI scores did not change (6.8 ± 5.9 versus 6.0 ± 5.4; p > 0.10). SAS-SR subscales scores remained stable, except for a decreasing pattern for leisure/social life (1.8 ± 0.4 versus 2.1 ± 0.4; p < 0.001). AMS scores for motivation to know (22.2 ± 4.5 versus 19.7 ± 5.5; p < 0.001), to accomplish things to know (17.7 ± 5.3 versus 15.4 ± 5.3; p = 0.001), to experience to know (18.2 ± 5.2 versus 15.4 ± 5.4; p < 0.001) and by identification to know (23.5 ± 3.5 versus 21.8 ± 5.0; p = 0.002) decreased significantly. There were no significant correlations between academic performance and the global scores for any of the scales except for the SAS-SR subscale for academic life (r = -0.48, p < 0.001).CONCLUSIONS: Throughout the academic year, first-year medical students showed increased anxiety, decreased academic motivation and a maladjusted leisure/social life, which however does not seem to affect academic achievement.

**PMID: 23444889 [PubMed - in process]**

**18. Med Teach. 2013 May;35(5):381-7. doi: 10.3109/0142159X.2013.769674. Epub 2013 Feb 27.**

**Integration and timing of basic and clinical sciences education.**

**Bandiera G, Boucher A, Neville A, Kuper A, Hodges B.**

**University of Toronto, ON, Canada. bandierag@smh.ca**

BACKGROUND: Medical education has traditionally been compartmentalized into basic and clinical sciences, with the latter being viewed as the skillful application of the former. Over time, the relevance of basic sciences has become defined by their role in supporting clinical problem solving rather than being, of themselves, a defining knowledge base of physicians. METHODS: As part of the national Future of Medical Education in Canada (FMEC MD) project, a comprehensive empirical environmental scan identified the timing and integration of basic sciences as a key pressing issue for medical education. Using the literature review, key informant interviews, stakeholder meetings, and subsequent consultation forums from the FMEC project, this paper details the empirical basis for focusing on the role of basic science, the evidentiary foundations for current practices, and the implications for medical education. FINDINGS: Despite a dearth of definitive relevant studies, opinions about how best to integrate the sciences remain strong. Resource allocation, political power, educational philosophy, and the shift from a knowledge-based to a problem-solving profession all influence the debate. There was little disagreement that both sciences are important, that many traditional models emphasized deep understanding of limited basic science disciplines at the expense of other relevant content such as social sciences, or that teaching the sciences contemporaneously rather than sequentially has theoretical and practical merit. Innovations in integrated curriculum design have occurred internationally. Less clear are the appropriate balance of the sciences, the best integration model, and solutions to the political and practical challenges of integrated curricula. DISCUSSION: New curricula tend to emphasize integration, development of more diverse physician competencies, and preparation of physicians to adapt to evolving technology and patients' expectations. Refocusing the basic/clinical dichotomy to a foundational/applied model may yield benefits in training widely competent future physicians.

**PMID: 23444888 [PubMed - in process]**

**19. Med Teach. 2013 May;35(5):376-80. doi: 10.3109/0142159X.2013.769678. Epub 2013 Feb 27.**

**Cause or effect? The relationship between student perception of the medical school learning environment and academic performance on USMLE Step 1.**

**Wayne SJ, Fortner SA, Kitzes JA, Timm C, Kalishman S.**

**Office of Program Evaluation, Education and Research, University of New Mexico School of Medicine, Albuquerque, NM 87131, USA. swayne@salud.unm.edu**

BACKGROUND: A school's learning environment is believed to influence academic performance yet few studies have evaluated this association controlling for prior academic ability, an important factor since students who do well in school tend to rate their school's environment more highly than students who are less academically strong. AIM: To evaluate the effect of student perception of the learning environment on their performance on a standardized licensing test while controlling for prior academic ability. METHODS: We measured perception of the learning environment after the first year of medical school in 267 students from five consecutive classes and related that measure to performance on United States Medical Licensing Examination (USMLE) Step 1, taken approximately six months later. We controlled for prior academic performance by including Medical College Admission Test score and undergraduate grade point average in linear regression models. RESULTS: Three of the five learning environment subscales were statistically associated with Step 1 performance (p < 0.05): meaningful learning environment, emotional climate, and student-student interaction. A one-point increase in the rating of the subscales (scale of 1-4) was associated with increases of 6.8, 6.6, and 4.8 points on the Step 1 exam. CONCLUSION: Our findings provide some evidence for the widely held assumption that a positively perceived learning environment contributes to better academic performance.

**PMID: 23444883 [PubMed - in process]**

**20. Med Teach. 2013 May;35(5):422-3. doi: 10.3109/0142159X.2012.746454. Epub 2012 Dec 11.**

**Enhancing learners' attitudes toward reflective** p**ractice.**

**Dexter S, Mann K.**

**PMID: 23228087 [PubMed - in process]**

**21. Med Educ. 2013 May;47(5):495-510. doi: 10.1111/medu.12146.**

**Minding the gap between communication skills simulation and authentic experience.**

**Yardley S, Irvine AW, Lefroy J.**

**Research Institute for Primary Care and Health Sciences, Keele University, Keele, UK. syardley@doctors.org.uk**

CONTEXT: Concurrent exposure to simulated and authentic experiences duringundergraduate medical education is increasing. The impact of gaps or differences between contemporaneous experiences has not been adequately considered. We address two questions. How do new undergraduate medical students understand contemporaneous interactions with simulated and authentic patients? How and why do student perceptions of differences between simulated and authentic patient interactions shape their learning? METHODS: We conducted an interpretative thematic secondary analysis of research data comprising individual interviews (n = 23), focus groups (three groups, n = 16), and discussion groups (four groups, n = 26) with participants drawn from two different year cohorts of Year 1 medical students. These methods generated data from 48 different participants, of whom 17 provided longitudinal data. In addition, data from routinely collected written evaluations of three whole Year 1 cohorts (response rates ≥ 88%, n = 378) were incorporated into our secondary analysis dataset. The primary studies and our secondary analysis were conducted in a single UK medical school with an integrated curriculum. RESULTS: Our analysis identified that students generate knowledge and meaning from their simulated and authentic experiences relative to each other and that the resultant learning differs in quality according to meaning created by comparing and contrasting contemporaneous experiences. Three themes were identified that clarify how and why the contrasting of differences is an important process for learning outcomes. These are preparedness, responsibility for safety, and perceptions of a gap between theory and practice. CONCLUSIONS: We propose a conceptual framework generated by reframing common metaphors that refer to the concept of the gap to develop educational strategies that might maximize useful learning from perceived differences. Educators need to 'mind' gaps in collaboration with students if synergistic learning is to be constructed from contemporaneous exposure to simulated and authentic patient interactions. The strategies need to be tested in practice by teachers and learners for utility. Further research is needed to understand gaps in other contexts.© Blackwell Publishing Ltd 2013.

**PMID: 23574062 [PubMed - in process]**

**22. Med Educ. 2013 May;47(5):476-84. doi: 10.1111/medu.12102.**

**'More shades of grey in my answers': an interview study revisiting attitude erosion during clerkships.**

**Bombeke K, Symons L, Mortelmans D, Debaene L, Schol S, Van Royen P, De Winter B.**

**Department of Primary and Interdisciplinary Care, University of Antwerp, Antwerp, Belgium. katrien.bombeke@ua.ac.be**

CONTEXT: Small declines in patient-centred attitudes during medical education have caused great concern. Although some of the self-report scales applied have solid psychometric foundations, validity evidence for the interpretation of attitude erosion during clerkships remains weak. OBJECTIVES: We sought to address this gap in a qualitative study of the relationships between scores on four commonly used attitude scales and participants' experiences and reflections. Our aim was to gain a better understanding of the score changes from the participants' perspectives. METHODS: We conducted semi-structured interviews with 15 junior doctors from a cohort (n = 37) that had previously shown a small decline in patient-centred attitudes during clerkships, measured on four self-report scales. In the interviews, we explored interviewees' experiences of their development of patient-centredness and subsequently discussed their scale scores, particularly for those items that contributed to a rise or decline in scores. We analysed the data using a process of constant comparison among personal experiences, scale scores and participants' explanations of score changes, applying the coding techniques of grounded theory. RESULTS: The analysis revealed important response distortions that might be responsible for small declines in scores during clerkships separately from changes in attitudes. The drastic alterations to the participants' frame of reference, attributable to the transition to clinical practice, represented the most prominent cause of distortion. More nuanced, context-specific, patient-centred reasoning resulted in more neutral responses after clerkships, paradoxically causing a decline in scores. In addition to response distortions, the interviews revealed shortcomings in content validity such as an 'extreme' construct of patient-centredness. CONCLUSIONS: This study calls into question the validity of the interpretation of attitude erosion during clerkships. The findings suggest that small declines in scores on self-report attitude scales are related to a recalibration of trainees' understandings of patient-centredness as they grow more clinically experienced. The evolved construct of patient-centredness and the way attitudes are measured require special attention in the development of future instruments.© Blackwell Publishing Ltd 2013.

**PMID: 23574060 [PubMed - in process]**

**23. Med Educ. 2013 May;47(5):443-52. doi: 10.1111/medu.12104.**

**Medicinal relationships: caring conversation.**

**Mikesell L.**

**Center for Health Services and Society, Department of Psychiatry andBiobehavioural Sciences, University of California Los Angeles, Los Angeles,California 90024, USA. mikesell.lisa@gmail.comComment in Med Educ. 2013 May;47(5):434-5. Med Educ. 2013 May;47(5):436-8.**

CONTEXT: Good social relationships are crucial to well-being and to health in particular. The perception of having supportive social relationships has effects on reducing morbidity and mortality comparable with those of a good diet, regular exercise and cessation of moderate smoking. This suggests that supportive, trusting relationships with doctors could have a substantial direct biomedical effect on patients' health. METHODS: A critical review of the patient-doctor relationship (PDR) literature is presented, along with a review of relevant interactional studies that examine doctor-patient interactions from the perspective of conversation analysis (CA). This literature shows how patients respond to doctors' verbal and non-verbal behaviours in systematic ways that affect how they disclose and how they relate to doctors. RESULTS: Findings from the CA literature suggest that clinicians might consider several important interactional features to improve the PDR and perhaps also patient health outcomes: (i) the use of open-ended questions (e.g. 'What brought you in today?') and positive polarity items (e.g. 'Is there something else you wanted to talk about today?') elicits patient concerns and addresses unmet concerns more effectively than the use of closed questions and negative polarity items, respectively; (ii) eye gaze suggests availability and an attending recipient, and patients indicate that doctor attentiveness at crucial parts of their problem presentation is important, and (iii) verbal dysfluencies are one practice speakers employ to gain the attention of a non-attending recipient. Doctors may want to pay attention to patients' dysfluencies to better understand when their attention is valued. CONCLUSIONS: Constructing supportive relationships with patients often does not require a great investment of time, but it does require commitment to 'being there for patients'. This review suggests that when doctors attune to language and social practices during medical consultations, the relationships they develop with patients may substantially improve patients' health and be intrinsically rewarding for both doctors and patients.© Blackwell Publishing Ltd 2013.

**PMID: 23574057 [PubMed - in process]**

**April, 2013 Journal Watch PubMed Results**

**1. Med Teach. 2013 Apr 30. [Epub ahead of print]**

**Creation of an Interprofessional Clinical Experience for Healthcare ProfessionsTrainees in a Nursing Home Setting.**

**Ford CR, Foley KT, Ritchie CS, Sheppard K, Sawyer P, Swanson M, Harada CN, Brown CJ.**

**University of Alabama at Birmingham , USA "Birmingham/Atlanta VA GRECC"**

Successful interprofessional teams are essential when caring for older adults with multiple complex medical conditions that require ongoing management from a variety of disciplines across healthcare settings. To successfully integrate interprofessional education into the healthcare professions curriculum, the most effective learning experiences should utilize adult learning principles, reflect real-life practice, and allow for interaction among trainees representing a variety of health professions. Interprofessional clinical experiences are essential to prepare future healthcare professionals to provide quality patient care and understand the best methods for utilizing members of the healthcare team to provide that care. To meet this need, the University of Alabama at Birmingham Geriatric Education Center has developed an Interprofessional Clinical Experience(ICE) to expose future healthcare providers to an applied training experience with older adults in the nursing home setting. This paper outlines how this program was developed, methods used for program evaluation, and how the outcome data influenced program revisions.

**PMID: 23631410 [PubMed - as supplied by publisher]**

**2. Med Teach. 2013 Apr;35(4):287-94. doi: 10.3109/0142159X.2013.773395.**

**The role of ePortfolios in supporting continuing professional development inpractice.**

**Gordon JA, Campbell CM.**

**Royal College of Physicians and Surgeons of Canada, Canada.jgordon@royalcollege.ca**

**Comment in Med Teach. 2013 Apr;35(4):271.**

ePortfolios, based on models of reflective practice, are viewed as important tools in facilitating and supporting lifelong learning across the medical education continuum. MAINPORT, the ePortfolio designed by the Royal College of Physicians and Surgeons of Canada, supports the continuing professional development (CPD) and lifelong learning of specialist physicians practicing in Canada by providing tools to develop CPD plans, set and track progress of established learning goals, document and reflect on learning activities, and create the foundation for physicians to manage their learning. In this article,the authors summarize the key design principles of the Royal College's ePortfolio: learner-centered; interoperable; ease of access. The current core functionality as well as future planned functionality for MAINPORT are described under three domains: recording and reflecting on completed CPD activities; managing learning in practice; accessing learning resources and programs. The future MAINPORT will evolve to become a foundational tool to support the shift towards competency-based medical education across the continuum of medical education; from residency to retirement. MAINPORT will facilitate the ability of physicians to demonstrate their expertise over time and how their learning has enabled improvements to their practice in contributing to improved health outcomes for patients.

**PMID: 23590423 [PubMed - in process]**

**3. Med Teach. 2013 Apr;35(4):269-70. doi: 10.3109/0142159X.2012.749345. Epub 2013Apr8**.

**Historical factors influencing medical education research productivity.**

**Norman G.**

**Department of Clinical Epidemiology and Biostatistics, McMaster University,Canada. norman@mcmaster.caComment on Med Teach. 2013 Apr;35(4):277-81.**

The author explores the reasons why both Canada and the Netherlands have a productivity in medical education research that is disproportionate to their size. He suggests that the historical introduction of problem-based learning early in both countries by McMaster and Maastricht, respectively, with a commitment for programmatic and broader research in both institutions has left this legacy.

**PMID: 23560767 [PubMed - in process]**

**4. Acad Med. 2013 Apr;88(4):552. doi: 10.1097/ACM.0b013e31828abf7f.AM last page.**

**Quality criteria in qualitative and quantitative research.**

**Frambach JM, van der Vleuten CP, Durning SJ. Maastricht University.**

**PMID: 23531762 [PubMed - indexed for MEDLINE]**

**5. Acad Med. 2013 Apr;88(4):438-41. doi: 10.1097/ACM.0b013e318285b019.**

**The next generation of doctoring.**

**Wilkes MS, Hoffman JR, Slavin SJ, Usatine RP.University of California, Davis, School of Medicine, Sacramento, California 95616, USA. mwilkes@ucdavis.edu**

The authors reflect on the creation of the Doctoring program at the UCLA School of Medicine two decades ago. Although Doctoring--at UCLA and other institutions where it has been implemented--has successfully taught large numbers of students psychosocial content and communications skills that are often overlooked in traditional medical school curricula and has had an impact on the larger culture of medical education, the authors believe that its full promise remains unfulfilled. Of the many practical difficulties they encountered in creating and implementing this comprehensive program, the greatest barriers, by far, were cultural. The authors argue that the impact of programs like Doctoring-programs that attempt not only to change the content of what students learn but also to encourage students to think critically and to question fundamental aspects of the way medicine is taught, learned, and practiced-cannot grow unless and until the larger culture of medicine also changes. They offer recommendations for overcoming barriers to improve the next generation of Doctoring and similar programs; these include changing the philosophy behind the selection of medical students, providing far greater resources and support for course faculty, and altering incentives for medical school faculty. They conclude that until major cultural and structural barriers are overcome and the values that Doctoring and like programs attempt to engender become the primary values of the larger culture they seek to change, these programs will continue in fundamental ways to function outside the dominant culture of medicine.

**PMID: 23531757 [PubMed - indexed for MEDLINE]**

**6. Acad Med. 2013 Apr;88(4):435. doi: 10.1097/ACM.0b013e3182854f57.**

**Why we must teach written and verbal communication skills to medical students and residents.**

**Simonson JA.PMID: 23531753 [PubMed - indexed for MEDLINE]**

**7. Teach Learn Med. 2013;25(2):165-70. doi: 10.1080/10401334.2013.770741.**

**e-Professionalism: a new frontier in medical education.**

**Kaczmarczyk JM, Chuang A, Dugoff L, Abbott JF, Cullimore AJ, Dalrymple J, DavisKR, Hueppchen NA, Katz NT, Nuthalapaty FS, Pradhan A, Wolf A, Casey PM.**

**Department of Obstetrics and Gynecology, Philadelphia College of OsteopathicMedicine, OB/GYN, Philadelphia, Pennsylvania 19131, USA. josephkac@pcom.edu**

BACKGROUND: This article, prepared by the Association of Professors of Gynecologyand Obstetrics Undergraduate Medical Education Committee, discusses the evolving challenges facing medical educators posed by social media and a new form of professionalism that has been termed e-professionalism. SUMMARY: E-professionalism is defined as the attitudes and behaviors that reflect traditional professionalism paradigms but are manifested through digital media. One of the major functions of medical education is professional identity formation; e-professionalism is an essential and increasingly important elementof professional identity formation, because the consequences of violations of e-professionalism have escalated from academic sanctions to revocation of licensure. CONCLUSION: E-professionalism should be included in the definition, teaching, and evaluation of medical professionalism. Curricula should include a positive approach for the proper professional use of social media for learners.

**PMID: 23530680 [PubMed - in process]**

**8. Teach Learn Med. 2013;25(2):159-64. doi: 10.1080/10401334.2013.770746.**

**Enhancing medical education by improving statistical methodology in journal articles.**

**Markert RJ. Department of Internal Medicine, Wright State University Boonshoft School ofMedicine, Dayton, Ohio 45409-2902, USA. ronald.markert@wright.edu**

BACKGROUND: Medical journal articles often contain imprecise and inaccurate statistical methods and terminology that inhibit effective teaching and learning in medical education. SUMMARY: Examples are used for ten flaws dealing with research design and methods and statistical analysis. CONCLUSIONS: If these inaccurate and inappropriate usages are avoided, teaching and learning in medical student and graduate medical education will be enhanced, and subsequently the health care of patients will be improved.

**PMID: 23530679 [PubMed - in process]**

**9. Teach Learn Med. 2013;25(2):155-8. doi: 10.1080/10401334.2013.772016.**

**The Safe and Effective Clinical Outcomes (SECO) clinic: learning responsibility for patient care through simulation.**

**Williamson M, Walker T, Egan T, Storr E, Ross J, Kenrick K. Department of General Practice and Rural Health, Dunedin School of Medicine,Otago University, Dunedin, New Zealand. martyn.williamson@otago.ac.nz**

BACKGROUND: This article describes a simulated General Practice clinic for medical students, which incorporates specific features to aid learning of clinical problem solving. DESCRIPTION: We outline the overall objectives of the simulation, explain the concept, and describe how the clinic works. The clinic is novel in that it utilises clinical outcomes as measures for student success in the consultation. There are no time restrictions on a consultation. Students are unobserved and have open access to clinical information and telephone advice from a senior colleague. EVALUATION: The achievement of the case-specific outcomes is assessed by reference to students' clinical notes and the responses of the simulated patients to specific scenario-related questions. Following the clinic there is a debrief session, and students are provided with the evidence base and outcomes for each scenario. CONCLUSIONS: The clinic has been part of our undergraduate curriculum since 2004. Collectively, students rate it as their most effective learning experience.

**PMID: 23530678 [PubMed - in process]**

**10. Teach Learn Med. 2013;25(2):129-33. doi: 10.1080/10401334.2013.770739.**

**The value of a writing center at a medical university.**

**Ariail J, Thomas S, Smith T, Kerr L, Richards-Slaughter S, Shaw D.Center for Academic Excellence and Writing Center, Medical University of SouthCarolina, Charleston, South Carolina 29425, USA**.

BACKGROUND: Students often enter graduate healthcare/biomedical schools with insufficient undergraduate instruction in effective writing, yet the ability to write well affects their career opportunities in health care and in scientific research. PURPOSE: The present study was conducted to determine the value and effectiveness of instruction by faculty with expertise in teaching writing at a writing center at an academic health science center. METHODS: Two separate sources of data were collected and analyzed. First, ananonymous campus-wide survey assessed students' satisfaction and utilization of the university's Writing Center. Second, a nonexperimental objective study was conducted comparing a subsample of students who used versus those who did not receive instruction at the Writing Center on quality of writing, as determined by an evaluator who was blind to students' utilization status. RESULTS: From the campus-wide survey, more than 90% of respondents who used the center (which was 26% of the student body) agreed that it was a valuable and effective resource. From the objective study of writing quality, students who used the Writing Center were twice as likely as students who did not to receive an A grade on the written assignment, and the blinded evaluator accurately estimated which students used the Writing Center based on the clarity of writing. CONCLUSIONS: The instruction at the Writing Center at our university is highly valued by students, and its value is further supported by objective evidence of efficacy. Such a center offers the opportunity to provide instruction that medical and other healthcare students increasingly need without requiring additions to existing curricula. By developing competency in writing, students prepare for scholarly pursuits, and through the process of writing, they engage critical thinking skills that can make them more attuned to narrative and more reflective and empathetic in the clinical setting.

**PMID: 23530674 [PubMed - in process]**

1**1. Med Teach. 2013 Apr;35(4):e1035-45. doi: 10.3109/0142159X.2013.774082. Epub 2013 Mar 15.**

**The "problem" learner: whose problem is it? AMEE Guide No. 76.**

**Steinert Y.**

**Centre for Medical Education, Faculty of Medicine, McGill Universit, Canada.yvonne.steinert@mcgill.ca**

Clinical teachers often work with students or residents whom they perceive as a"problem". For some, it is a knowledge deficit that first alerts them to a problem; for others it is an attitudinal problem or distressing behaviour. And in some cases, it is difficult to know if the learner is, indeed, presenting with a problem. The goal of this Guide is to outline a framework for working with"problem" learners. This includes strategies for identifying and defining learners' problems, designing and implementing appropriate interventions, and assuring due process. The potential stress of medical school and residency training will also be addressed, as will a number of prevention strategies. Identifying learners' problems early - and providing guidance from the outset can be an important investment in the training and development of future health professionals. It is hoped that this Guide will be of help to clinical teachers, program directors and faculty developers.

**PMID: 23496125 [PubMed - in process]**

**12. Med Educ. 2013 Apr;47(4):397-407. doi: 10.1111/medu.12114.**

**In the eye of the beholder: student perspectives on professional roles in practice**.

**Bennett D, McCarthy M, O'Flynn S, Kelly M.Medical Education Unit, School of Medicine, University College Cork, Cork,Ireland. d.bennett@ucc.ie**

**Comment in Med Educ. 2013 Apr;47(4):339-41.**

CONTEXT: Learning about professional roles in clinical settings is confounded by the gap between espoused theory and the professional practice of the workplace. Workplace learning is grounded in that which is afforded to learners and individuals' engagement with those affordances. The meaning students make of the real-world performance of professional roles and how this relates to formal professionalism frameworks remain unclear. Construal of experience is individual. Professional roles are enacted in the eye of the beholder. In their reflections, student subjectivities, intentionalities and engagement with workplace affordances are revealed. Our research question was: How do students' perspectives of professional roles in practice, revealed through written reflections, relate to the formal professionalism curriculum? METHODS: Year 3 students (n = 108) wrote reflections during hospital and community placements. Thematic content analysis was performed. A priori categories based on the CanMEDS Physician Roles Framework were used to map content. RESULTS: A total of 107 students consented to the use of their reflections (n =315). The CanMEDS roles of Communicator, Professional and Scholar predominated. Students were seen applying prior knowledge to new situations and reflecting on them. For some, the confirmation of previous learning was the outcome; for others, the mismatch between practice and the formal curriculum led to the questioning of both. The roles of Manager, Collaborator and Health Advocate were less frequently reflected upon. Differences between the affordances of hospital and community placements were seen. Means to address findings are discussed with reference to Billett's duality of workplace learning. CONCLUSIONS: Reflective narratives reveal how students construe professional roles in practice. Mapping the content of reflections to a competency framework confirmed the mismatch between the formal and enacted curricula. Billett's duality of workplace learning provides a useful lens through which to identify means to address this, through the structural aspects of access and guidance, and through the promotion of individual engagement and reflection. © Blackwell Publishing Ltd 2013.

**PMID: 23488759 [PubMed - in process]**

**13. Med Educ. 2013 Apr;47(4):362-74. doi: 10.1111/medu.12087.**

**Student perceptions of assessment and feedback in longitudinal integratedclerkships.Bates J, Konkin J, Suddards C, Dobson S, Pratt D.**

**Centre for Health Education Scholarship, Faculty of Medicine, University ofBritish Columbia, Vancouver, British Columbia, Canada. joanna.bates@ubc.ca**

OBJECTIVES: This study was conducted to elucidate how the learning environment and the student-preceptor relationship influence student experiences of being assessed and receiving feedback on performance. Thus, we examined how long-term clinical clerkship placements influence students' experiences of and views about assessment and feedback. METHODS: We took a constructivist grounded approach, using authentic assessment and communities of practice as sensitising concepts. We recruited and interviewed 13 students studying in longitudinal integrated clerkships across two medical schools and six settings, using a semi-structured interview framework. We used an iterative coding process to code the data and arrive at a coding framework and themes. RESULTS: Students valued the unstructured assessment and informal feedback that arose from clinical supervision, and the sense of progress derived from their increasing responsibility for patients and acceptance into the health care community. Three themes emerged from the data. Firstly, students characterised their assessment and feedback as integrated, developmental and longitudinal. They reported authenticity in the monitoring and feedback that arose from the day-to-day delivery of patient care with their preceptors. Secondly, students described supportive and caring relationships and a sense of safety. These enabled them to reflect on their strengths and weaknesses and to interpret critical feedback as supportive. Students developed similar relationships across the health care team. Thirdly, the long-term placement provided for multiple indicators of progress for students. Patient outcomes were perceived as representing direct feedback about students' development as doctors. Taking increasing responsibility for patients over time is an indicator to students of their increasing competence and contributes to the developing of a doctor identity. CONCLUSIONS: Clerkship students studying for extended periods in one environment with one preceptor perceive assessment and feedback as authentic because they are embedded in daily patient care, useful because they are developmental and longitudinal, and constructive because they occur in the context of a supportive learning environment and relationship.© Blackwell Publishing Ltd 2013.

**PMID: 23488756 [PubMed - in process]**

**14. Med Educ. 2013 Apr;47(4):339-41. doi: 10.1111/medu.12144.**

**Widening debates about medical professionalism.**

**Graham C, de Leeuw S, Markless S.Northern Medical Program, University of British Columbia, 3333 University Way,Prince George, British Columbia V2K 4Z9, Canada. cgraham@unbc.caComment on Med Educ. 2013 Apr;47(4):397-407.**

**PMID: 23488753 [PubMed - in process]**

**15. Med Educ. 2013 Apr;47(4):336-9. doi: 10.1111/medu.12139.**

**Transformative learning through longitudinal integrated clerkships.**

**Greenhill J, Poncelet AN.Rural Clinical School, Flinders University, PO Box 852, Renmark, South Australia 5341, Australia. jennene.greenhill@flinders.edu.auComment on Med Educ. 2013 Apr;47(4):352-61.**

**PMID: 23488752 [PubMed - in process]**

**16. Acad Med. 2013 Apr;88(4):535-40. doi: 10.1097/ACM.0b013e3182860e6d.**

**Becoming a doctor: a qualitative evaluation of challenges and opportunities in medical student wellness during the third year.**

**Kligler B, Linde B, Katz NT.Albert Einstein College of Medicine of Yeshiva University, Bronx, New York 10016,USA. bkligler@chpnet.org**

PURPOSE: To improve understanding of the impact of the third year on medical student wellness and help educators improve approaches to promoting wellness. METHOD: The authors used an interpretive description approach to conduct a qualitative analysis of required essays written by 173 third-year medical students as part of a May 2011 final exam at the Albert Einstein College of Medicine of Yeshiva University. In these essays, students reflected on how the transition to clinical responsibilities during the third year of medical school had affected their own health and wellness behaviors. RESULTS: Four themes emerged. Students described the difficulty of making healthy choices in the face of time challenges, the effect of becoming a role model for patients, and the impact of information on their view of their own health and wellness. A subset reflected on the tension between self-care and dedication towork that is inherent in developing a professional identity as a physician. Some students characterized these as challenges that encouraged them to be more active and effective in managing their own health; others viewed them as insurmountable obstacles that prevented them from making healthy choices. CONCLUSIONS: The new responsibilities in the third year of medical school comprise a unique set of opportunities and challenges that affect how students make choices regarding health and wellness. Educators should develop strategies for identifying and supporting students who are likely to experience the transition as difficult, and for capitalizing on learning opportunities by framing these challenges as part of students' professional development.

**PMID: 23425993 [PubMed - indexed for MEDLINE]**

**17. Acad Med. 2013 Apr;88(4):461-4. doi: 10.1097/ACM.0b013e3182857f67.**

**Tradition meets innovation: transforming academic medical culture at** **the University of Pennsylvania's Perelman School of Medicine.**

**Pati S, Reum J, Conant E, Tuton LW, Scott P, Abbuhl S, Grisso JA.Division of Primary Care Pediatrics, School of Medicine, Stony Brook Universityand Stony Brook Long Island Children's Hospital, Stony Brook, New York11794-8111, USA. susmita.pati@stonybrook.edu**

Traditional performance expectations and career advancement paths for academic physicians persist despite dramatic transformations in the academic workflow, workload, and workforce over the past 20 years. Although the academic physician's triple role as clinician, researcher, and educator has been lauded as the ideal by academic health centers, current standards of excellence for promotion and tenure are based on outdated models. These models fail to reward collaboration and center around rigid career advancement plans that do little to accommodate the changing needs of individuals and organizations. The authors describe an innovative, comprehensive, multipronged initiative at the Perelman School of Medicine at the University of Pennsylvania to initiate change in the culture of academic medicine and improve academic productivity, job satisfaction, and overall quality of life for junior faculty. As a key part of this intervention, task forces from each of the 13 participating departments/divisions met five times between September 2010 and January 2011 to produce recommendations for institutional change. The authors discuss how this initiative, using principles adopted from business transformation, generated themes and techniques that can potentially guide workforce environment innovation in academic health centers across the United States. Recommendations include embracing a promotion/tenure/evaluation system that supports and rewards tailored individual academic career plans; ensuring leadership, decision-making roles, and recognition for junior faculty; deepening administrative and team supports for junior faculty; and solidifying and rewarding mentorship for junior faculty. By doing so, academic health centers can ensure the retention and commitment of faculty throughout all stages of their careers.

**PMCID: PMC3610775 [Available on 2014/4/1]PMID: 23425986 [PubMed - indexed for MEDLINE]**

**18. Acad Med. 2013 Apr;88(4):527-34. doi: 10.1097/ACM.0b013e31828578bb.**

**"A good career choice for women": female medical students' mentoring experiences: a multi-institutional qualitative study.**

**Levine RB, Mechaber HF, Reddy ST, Cayea D, Harrison RA.Division of General Internal Medicine, Johns Hopkins University School ofMedicine, Baltimore, Maryland 21224, USA. rlevine@jhmi.edu**

PURPOSE: The career decisions, practice patterns, and approach to patient care of current female students, who make up close to 50% of medical school classes, will have a profound impact on the profession. This study explores the role gender plays in the mentoring experiences of female medical students. METHOD: In 2011, the authors conducted focus groups with 48 third- and fourth-year female medical students at four U.S. medical schools. Using a template organizing style, they derived themes in an iterative process to explore female medical students' mentoring relationships and the impact of gender on those relationships. RESULTS: The authors identified four major themes: (1) Optimal mentoring relationships are highly relational. Students emphasized shared values, trust, and a personal connection in describing ideal mentoring relationships. (2)Relational mentoring is more important than gender concordance. Students identified a desire for access to female mentors but stated that when a mentor and mentee developed a personal connection, the gender of the mentor was less important. (3) Gender-based assumptions and stereotypes affect mentoring relationships. Students described gender-based assumptions and expectations for themselves and their mentors. (4) Gender-based power dynamics influence students' thinking about mentoring. Students stated that they were concerned about how their mentors might perceive their professional decisions because of their gender, which influenced what they disclosed to male mentors and mentors in positions of power. CONCLUSIONS: Gender appears to play a role in female medical students' expectations and experience with mentoring relationships and may influence their decision making around career planning.

**PMID: 23425983 [PubMed - indexed for MEDLINE]**

**19. Acad Med. 2013 Apr;88(4):442-8. doi: 10.1097/ACM.0b013e3182851b5b.**

**Clarifying assumptions to enhance our understanding and assessment of clinicalreasoning.**

**Durning SJ, Artino AR Jr, Schuwirth L, van der Vleuten C.Uniformed Services University of the Health Sciences, Bethesda, Maryland 20814,USA. steven.durning@usuhs.edu**

Deciding on a diagnosis and treatment is essential to the practice of medicine. Developing competence in these clinical reasoning processes, commonly referred to as diagnostic and therapeutic reasoning, respectively, is required for physician success. Clinical reasoning has been a topic of research for several decades, and much has been learned. However, there still exists no clear consensus regarding what clinical reasoning entails, let alone how it might best be taught, how it should be assessed, and the research and practice implications therein. In this article, the authors first discuss two contrasting epistemological views of clinical reasoning and related conceptual frameworks. They then outline four different theoretical frameworks held by medical educators that the authors believe guide educators' views on the topic, knowingly or not. Within each theoretical framework, the authors begin with a definition of clinical reasoning (from that viewpoint) and then discuss learning, assessment, and research implications. The authors believe these epistemologies and four theoretical frameworks also apply to other concepts (or "competencies") in medical education. The authors also maintain that clinical reasoning encompasses the mental processes and behaviors that are shared (or evolve) between the patient, physician, and the environment (i.e., practice setting). Clinical reasoning thus incorporates components of all three factors (patient, physician, environment).The authors conclude by outlining practical implications and potential future areas for research.

**PMID: 23425980 [PubMed - indexed for MEDLINE]**

**March, 2013 Journal Watch PubMed Results**

1. Med Teach. 2013;35(3):226-30. doi: 10.3109/0142159X.2012.735384. Epub 2013 Feb 20.

**Incorporating iPads into a preclinical curriculum: A pilot study.**

George P, Dumenco L, Doyle R, Dollase R.

The Warren Alpert Medical School of Brown University , USA.

Abstract:

Background: The incorporation of technology into medical education is critical for learners. Little is known about the effect of integrating iPad technology into undergraduate medical education. Aims: We introduced iPads into the first-year curriculum in 2011-2012. We aimed to evaluate students' use of, and attitudes toward, the iPad. Methods: We administered two surveys to students during the 2011-2012 academic year. Additionally, we conducted focus groups to further evaluate the effectiveness of iPad integration into the curriculum. Results: Survey data reflect mixed attitudes toward the use of the iPad in the preclinical curriculum. While a vast majority of students agree "the iPad has value in the medical curriculum" (79% in the first survey; 65% in the second survey), there was a decrease over time in the view that "the iPad is a positive addition to the curriculum" (75% in the first survey; 49% in the second survey). Focus group data indicate students appreciate certain aspects of iPad use in the curriculum, including improved curriculum interactivity, but the majority believe it cannot replace printed handouts at this time. Discussion: The iPad provides some benefits in undergraduate medical education. More studies are necessary to determine how the iPad is best incorporated into medical education.

PMID: 23425119 [PubMed - in process]

2. Med Teach. 2013;35(3):219-25. doi: 10.3109/0142159X.2012.737966. Epub 2013 Feb 20.

**Patients as educators: Interprofessional learning for patient-centred care.**

Towle A, Godolphin W.

University of British Columbia , Canada.

Abstract:

Background: Patients with chronic conditions have unique expertise that enhances interprofessional education. Although their active involvement in education is increasing, patients have minimal roles in key educational tasks. A model that brings patients and students together for patient-centred learning, with faculty playing a supportive role, has been described in theory but not yet implemented. Aims: To identify issues involved in creating an educational intervention designed and delivered by patients and document outcomes. Method: An advisory group of community members, students and faculty guided development of the intervention (interprofessional workshops). Community educators (CEs) were recruited through community organizations with a healthcare mandate. Workshops were planned by teams of key stakeholders, delivered by CEs, and evaluated by post-workshop student questionnaires. Results: Workshops were delivered by CEs with epilepsy, arthritis, HIV/AIDS and two groups with mental health problems. Roles and responsibilities of planning team members that facilitated control by CEs were identified. Ten workshops attended by 142 students from 15 different disciplines were all highly rated. Workshop objectives defined by CEs and student learning both closely matched dimensions of patient-centredness. Conclusions: Our work demonstrates feasibility and impact of an educational intervention led by patient educators facilitated but not controlled by faculty.

PMID: 23425118 [PubMed - in process]

3. Med Educ. 2013 Mar;47(3):317-25. doi: 10.1111/medu.12115.

**Exploring the relationships among attachment, emotional intelligence and communication.**

Cherry MG, Fletcher I, O'Sullivan H.

Centre for Excellence in Evidence-Based Learning and Teaching (CEEBLT), School of Medical Education, University of Liverpool, Liverpool, UK.

m.g.cherry@liverpool.ac.uk

Abstract:

OBJECTIVES: Attachment style has been shown to influence both emotional intelligence (EI) and the clinical communication of medical students and doctors. No research has assessed the relationships among attachment, EI and clinical communication in medical students. This study was conducted to evaluate the effect of EI on the relationship between medical students' attachment style and clinical communication. METHODS: Medical students were invited to complete measures of attachment (using the Experiences in Close Relationships-Short Form [ECR-SF], a 12-item measure that provides attachment avoidance and attachment anxiety dimensional scores) and EI (using the Mayer-Salovey-Caruso Emotional Intelligence Test [MSCEIT], a 141-item measure of the perception, use, understanding and management of emotions) at the end of Year 1, prior to a summative objective structured clinical examination (OSCE). Clinical communication was assessed using OSCE scores. Structural equation modelling (SEM) was used to analyse a hypothetical model of the relationships among attachment style, EI and clinical communication. RESULTS: A total of 200 of 358 (55.9%) students participated. Attachment avoidance was significantly negatively correlated with total EI scores (r=-0.28, p<0.01); total EI was significantly positively correlated with OSCE scores (r = 0.23, p < 0.01). A parsimonious SEM revealed that attachment avoidance accounted for 13% of the variance in students' total EI scores but did not directly predict OSCE scores, whereas total EI significantly predicted 7% of the variance in OSCE scores. CONCLUSIONS: Attachment is perceived to be stable from early adulthood, whereas the literature suggests that EI can be developed through the use of targeted interventions. This has potential implications for the training of medical students in clinical communication. © Blackwell Publishing Ltd 2013.

PMID: 23398018 [PubMed - in process]

4. Med Teach. 2013;35(3):243-7. doi: 10.3109/0142159X.2012.737964. Epub 2013 Jan 29.

**Emotional intelligence competencies provide a developmental curriculum for medical training.**

Stoller JK, Taylor CA, Farver CF.

Cleveland Clinic Foundation , USA.

Abstract:

Since healthcare faces challenges of access, quality, and cost, effective leadership for healthcare is needed. This need is especially acute among physicians, whose demanding training focuses on scientific and clinical skills, eclipsing attention to leadership development. Among the competencies needed by leaders, emotional intelligence (EI) - defined as the ability to understand and manage oneself and to understand others and manage relationships - has been shown to differentiate between great and average leaders. In this context, teaching EI as part of the medical training curriculum is recommended. Furthermore, because physicians' developmental needs evolve over the course of prolonged training, specific components of EI (e.g., teambuilding, empathy, and negotiation) should be taught at various phases of medical training. Consistent with the concept of a spiral curriculum, such EI competencies should be revisited iteratively throughout training, with differing emphasis and increasing sophistication to meet evolving needs. For example, teamwork training is needed early in undergraduate medical curricula to prompt collaborative learning. Teamwork training is also needed during residency, when physicians participate with differing roles on patient care teams. Training in EI should also extend beyond graduate medical training to confer the skills needed by clinicians and by faculty in academic medical centers.

PMID: 23360483 [PubMed - in process]

5. Acad Med. 2013 Mar;88(3):390-7. doi: 10.1097/ACM.0b013e31827fc58d.

**Developing a unified list of physicians' reasoning tasks during clinical encounters**

Goldszmidt M, Minda JP, Bordage G.

Centre for Education Research and Innovation, Department of Medicine, University of Western Ontario, Schulich School of Medicine and Dentistry, London, Ontario, Canada. Mark.Goldszmidt@Schulich.uwo.ca

Abstract:

PURPOSE: The clinical reasoning literature focuses on how physicians reason while making decisions, rather than on what they reason about while performing their clinical tasks. In an attempt to provide a common language for discussing, teaching, and researching clinical reasoning, the authors undertook the task of developing a unified list of physicians' reasoning tasks, or what they reason about, during clinical encounters. METHOD: The authors compiled an initial list of 20 reasoning tasks based on the literature from four content areas--clinical reasoning, communications, medical errors, and clinical guidelines. In the summer and fall of 2010, they surveyed a purposive sample of 46 international experts in clinical reasoning and communications. From the results of the first survey, the authors refined their list of reasoning tasks, then resurveyed 22 of the original participants. From the results of the second survey, they further refined their list and validated the inclusion of the reasoning tasks. RESULTS: Twenty-four of 46 (52%) and 15 of 22 (65%) participants completed the first- and second-round surveys, respectively. Following the second-round survey, the authors' list included 24 reasoning tasks, and a clinical example corresponding to each, that fell into four broad categories: framing the encounter (3), diagnosis (8), management (11), and self-reflection (2). CONCLUSIONS: The development of this unified list represents a first step in offering a vocabulary for discussing, reflecting on, teaching, and studying physicians' reasoning tasks during clinical encounters.

PMID: 23348079 [PubMed - in process]

6. Med Teach. 2013;35(3):248-50. doi: 10.3109/0142159X.2013.759643. Epub 2013 Jan 18.

**Effect of enhanced analytic reasoning on diagnostic accuracy: A randomized controlled study**.

Myung SJ, Kang SH, Phyo SR, Shin JS, Park WB.

Seoul National University College of Medicine , Republic of Korea.

Abstract:

Background: Diagnostic error can be caused by several types of cognitive bias, which may be reversed by enhancing analytic reasoning. Aims: To evaluate whether enhancing analytic reasoning can increase diagnostic accuracy in objective structured clinical examination (OSCE) in medical students. Methods: All fourth-year medical students, randomly assigned to the analytic reasoning or control groups, undertook the OSCE with four cases using standardized patients. The analytic reasoning group was requested to list differential diagnoses and findings compatible or not compatible with each diagnosis prior to providing a diagnosis, while the control group provided a diagnosis without these processes. Mean diagnostic accuracy scores (perfect score, 4.0) from four cases of OSCE were compared between the two groups. Results: One hundred forty-five students were randomly assigned to the analytic reasoning group (n = 65) or the control group (n = 80). The baseline characteristics, including grade point average and the scores from each patient encounter, were comparable between groups. Mean diagnostic accuracy scores were significantly higher in the analytic reasoning group than in the control group (3.40 ± 0.66 versus 3.05 ± 0.98; p = 0.011). Conclusion: Enhancement of analytic reasoning may improve diagnostic accuracy in novice doctors.

PMID: 23327617 [PubMed - in process]

7. Acad Med. 2013 Mar;88(3):352-63. doi: 10.1097/ACM.0b013e3182811a75.

**Training in Urban Medicine and Public Health: TRIUMPH**.

Haq C, Stearns M, Brill J, Crouse B, Foertsch J, Knox K, Stearns J, Skochelak S, Golden RN.

University of Wisconsin School of Medicine and Public Health, Madison, Wisconsin 53705, USA. clhaq@wisc.edu

Abstract:

PURPOSE: The number of U.S. medical school graduates who choose to practice in health professional shortage areas (HPSAs) has not kept pace with the needs of society. The University of Wisconsin School of Medicine and Public Health has created a new program that prepares medical students to reduce health disparities for urban medically underserved populations in Milwaukee. The authors describe the Training in Urban Medicine and Public Health (TRIUMPH) program and provide early, short-term outcomes. METHODS: TRIUMPH integrates urban clinical training, community and public health curricula, longitudinal community and public health projects, mentoring, and peer support for select third- and fourth-year medical students. The authors tracked and held focus groups with program participants to assess their knowledge, skills, satisfaction, confidence, and residency matches. The authors surveyed community partners to assess their satisfaction with students and the program. RESULTS: From 2009 to 2012, 53 students enrolled in the program, and 45 have conducted projects with community organizations. Participants increased their knowledge, skills, confidence, and commitment to work with urban medically underserved populations. Compared with local peers, TRIUMPH graduates were more likely to select primary care specialties and residency programs serving urban underserved populations. Community leaders have reported high levels of satisfaction and benefits; their interest in hosting students exceeds program capacity. CONCLUSIONS: Early, short-term outcomes confirm that TRIUMPH is achieving its desired goals: attracting and preparing medical students to work with urban underserved communities. The program serves as a model to prepare physicians to meet the needs of urban HPSAs.

PMID: 23348092 [PubMed - in process]

8. Acad Med. 2013 Mar;88(3):398-404. doi: 10.1097/ACM.0b013e318280d9db.

**How do social networks and faculty development courses affect clinical supervisors' adoption of a medical education innovation? An exploratory study.**

Jippes E, Steinert Y, Pols J, Achterkamp MC, van Engelen JM, Brand PL.

Center for Medical Imaging-North East Netherlands, University Medical Center Groningen, University of Groningen, Groningen, The Netherlands. e.jippes@umcg.nl

Abstract:

PURPOSE: To examine the impact of social networks and a two-day faculty development course on clinical supervisors' adoption of an educational innovation. METHOD: During 2007-2010, 571 residents and 613 clinical supervisors in four specialties in the Netherlands were invited to complete a Web-based questionnaire. Residents rated their clinical supervisors' adoption of an educational innovation, the use of structured and constructive (S&C) feedback. Clinical supervisors self-assessed their adoption of this innovation and rated their communication intensity with other clinical supervisors in their department. For each supervisor, a centrality score was calculated, representing the extent to which the supervisor was connected to departmental colleagues. The authors analyzed the effects of supervisor centrality and participation in a two-day Teach-the-Teacher course on the degree of innovation adoption using hierarchical linear modeling, adjusting for age, gender, and attitude toward the S&C feedback innovation. RESULTS: Respondents included 370 (60%) supervisors and 357 (63%) residents. Although Teach-the-Teacher course participation (n=172; 46.5%) was significantly related to supervisors' self-assessments of adoption (P=.001), it had no effect on residents' assessments of supervisors' adoption (P=.371). Supervisor centrality was significantly related to innovation adoption in both residents' assessments (P=.023) and supervisors' self-assessments (P=.024). CONCLUSIONS: A clinical supervisor's social network may be as important as faculty development course participation in determining whether the supervisor adopts an educational innovation. Faculty development initiatives should use faculty members' social networks to improve the adoption of educational innovations and help build and maintain communities of practice.

PMID: 23348089 [PubMed - in process]

9. Acad Med. 2013 Mar;88(3):322-7. doi: 10.1097/ACM.0b013e318280d8f7.

**MiPLAN: a learner-centered model for bedside teaching in today's academic medical centers.**

Stickrath C, Aagaard E, Anderson M.

University of Colorado School of Medicine, Aurora, Colorado, USA.

Chad.Stickrath@va.gov

Abstract:

Clinician educators and medical trainees face intense pressure to complete numerous patient care and teaching activities in a limited amount of time. To address the need for effective and efficient teaching methods for use in the inpatient setting, the authors used constructivist learning theory, the principles of adult learning, and their expertise as clinician educators to develop the MiPLAN model for bedside teaching. This three-part model is designed to enable clinical teachers to simultaneously provide care to patients while assessing learners, determining high-yield teaching topics, and providing feedback to learners.The "M" refers to a preparatory meeting between teacher and learners before engaging in patient care or educational activities. During this meeting, team members should become acquainted and the teacher should set goals and clarify expectations. The "i" refers to five behaviors for the teacher to adopt during learners' bedside presentations: introduction, in the moment, inspection, interruptions, and independent thought. "PLAN" is an algorithm to establish priorities for teaching subsequent to a learner's presentation: patient care, learners' questions, attending's agenda, and next steps.The authors suggest that the MiPLAN model can help clinical teachers gain more confidence in their ability to teach at the bedside and increase the frequency and quality of bedside teaching. They propose further research to assess the generalizability of this model to other institutions, settings, and specialties and to evaluateeducational and patient outcomes.

PMID: 23348088 [PubMed - in process]

10. Acad Med. 2013 Mar;88(3):343-8. doi: 10.1097/ACM.0b013e318280cb7b.

**Creating "innovator's DNA" in health care education.**

Armstrong EG, Barsion SJ.

Harvard Medical School, Boston, Massachusetts 02114, USA.

earmstrong@hms.harvard.edu

Abstract:

Serious deficits in health care education have been identified recently, yet proposed solutions call for faculty skill sets not typically developed in health professional schools or in continuing professional development (CPD) programs. The authors propose that addressing the oft-cited problems in health care education (e.g., it is not learner-centered and does not take advantage of insights gained from the learning sciences) requires faculty to develop "innovator's skills" including the ability to facilitate organizational change. Given increased social responsibilities and decreased financial resources, it is imperative that more health care educators and health care delivery system leaders not only become innovators themselves but also develop systems that support the next generation of innovators. Dyer et al conducted a comprehensive study of successful innovators and found five behavioral and cognitive "discovery" skill sets that constitute the "innovator's DNA": associating, questioning, observing, networking, and experimenting. This article uses the prism of innovator's DNA to examine a CPD program for health care educators, the Harvard Macy Institute (HMI), whose overarching purpose is to develop innovation skills in participants so that they can build their own educational models customized for implementing changes in their home institutions. A retrospective review of HMI alumni from 1995 to 2010 suggests that innovator skills can be taught and applied. The conceptual framework of the innovator's DNA provides a useful model for other CPD program leaders seeking to enable health care educators to develop the capacity for successfully examining problems and then customizing and implementing organizational change to solve them.

PMID: 23348085 [PubMed - in process]

11. Acad Med. 2013 Mar;88(3):413-20. doi: 10.1097/ACM.0b013e318280a953.

**The construct and criterion validity of the mini-CEX: a meta-analysis of the published research.**

Al Ansari A, Ali SK, Donnon T.

Department of Surgery, Faculty of Medicine, Bahrain Defense Force Hospital, Riffa, Bahrain.

Abstract:

PURPOSE: To conduct a meta-analysis of published studies to determine the construct and criterion validity of the mini-clinical evaluation exercise (mini-CEX) to measure clinical performance. METHODS: The authors included all peer-reviewed studies published from 1995 to 2012 that reported the relationship between participants' performance on the mini-CEX and on other standardized academic and clinical performance measures. Moderator variables and performance and standardized exam measures were extracted and reviewed independently using a standardized coding protocol. RESULTS: Performance measures from 11 studies were identified. A random-effects model of weighted mean effect size differences (d) resulted in: (1) construct validity coefficients for the mini-CEX on the trainees' performance across different residency year levels ranging from d=0.25 (95% confidence intervals [CI]: 0.04-0.46) to d=0.50 (95% CI: 0.31-0.70), and (2) concurrent validity coefficients for the mini-CEX based on personnel ratings ranging from d=0.23 (95% CI: 0.04-0.50) to d=0.50 (95% CI: 0.34-0.65). Also, a random-effects model of weighted correlation effect size differences (r) resulted in predictive validity coefficients for the mini-CEX on trainees' performance across different standardized measures ranging from r=0.26 (95% CI: 0.16-0.35) to r=0.85 (95% CI: 0.47-0.96). CONCLUSIONS: The construct and criterion validity of the mini-CEX was supported by small to large effect size differences based on measures between trainees' achievement and clinical skills performance, indicating that it is an important instrument for the direct observation of trainees' clinical performance.

PMID: 23348084 [PubMed - in process]

12. Acad Med. 2013 Mar;88(3):369-75. doi: 10.1097/ACM.0b013e318280a6f6.

**Estimating learning outcomes from pre- and posttest student self-assessments: a longitudinal study.**

Schiekirka S, Reinhardt D, Beißbarth T, Anders S, Pukrop T, Raupach T.

Göttingen Medical School, and Department of Cardiology and Pneumology, University Hospital Göttingen, Göttingen, Germany.

PURPOSE: Learning outcome is an important measure for overall teaching quality and should be addressed by comprehensive evaluation tools. The authors evaluated the validity of a novel evaluation tool based on student self-assessments, which may help identify specific strengths and weaknesses of a particular course. METHOD: In 2011, the authors asked 145 fourth-year students at Göttingen Medical School to self-assess their knowledge on 33 specific learning objectives in a pretest and posttest as part of a cardiorespiratory module. The authors compared performance gain calculated from self-assessments with performance gain derived from formative examinations that were closely matched to these 33 learning objectives. RESULTS: Eighty-three students (57.2%) completed the assessment. There was good agreement between performance gain derived from subjective data and performance gain derived from objective examinations (Pearson r=0.78; P<.0001) on the group level. The association between the two measures was much weaker when data were analyzed on the individual level. Further analysis determined a quality cutoff for performance gain derived from aggregated student self-assessments. When using this cutoff, the evaluation tool was highly sensitive in identifying specific learning objectives with favorable or suboptimal objective performance gains. CONCLUSIONS: The tool is easy to implement, takes initial performance levels into account, and does not require extensive pre-post testing. By providing valid estimates of actual performance gain obtained during a teaching module, it may assist medical teachers in identifying strengths and weaknesses of a particular course on the level of specific learning objectives.

PMID: 23348083 [PubMed - in process]

13. Acad Med. 2013 Mar;88(3):364-8. doi: 10.1097/ACM.0b013e31827fc6ae.

**Medical students' experiences with authorship in biomedical research: a national survey.**

Karani R, Ognibene FP, Fallar R, Gliatto P.

Mount Sinai School of Medicine, New York, New York 10029, USA.

reena.karani@mssm.edu

PURPOSE: To explore authorship issues related to medical students' primary research projects, assess medical students' knowledge about authorship issues in biomedical research, and determine their interest in learning about authorship guidelines. METHOD: In 2011, the authors developed and conducted an electronic survey of 243 U.S. medical students who attended an educational event at the National Institutes of Health as part of their funded, yearlong research fellowship programs. The authors then analyzed the results using descriptive statistics. RESULTS: Of 243 students, 152 (63%) responded. Most (120/151; 79%) had completed or were in the process of writing a manuscript based on their projects. Of these, most (95/119; 80%) wrote the entire manuscript independently or with guidance. Whereas almost two-thirds (99/152; 65%) indicated that expectations and criteria for authorship were clarified for them, 26% (40/152) indicated that they were not. Most students (108/118; 92%) were in the authorship position they expected and had no concerns about who the other authors were (91/119; 77%). Of those with concerns, 52% (11/21) did not raise the issue for fear of challenging their mentor. Two-thirds (95/145; 66%) never received formal training in authorship guidelines, and 41% (42/103) believed such training would be valuable. CONCLUSIONS: Although a majority of students had conversations about authorship and were clear about the guidelines for ethical authorship, additional work is needed. The authors recommend that academic institutions develop a menu of options for teaching students about this important area in research ethics.

PMID: 23348080 [PubMed - in process]

**February, 2013 Journal Watch PubMed Results**

1. Med Teach. 2013 Feb 27. [Epub ahead of print]

[The desirable qualities of future doctors - A study of medical student perceptions.](http://www.ncbi.nlm.nih.gov/pubmed/23444882)

[Hurwitz S](http://www.ncbi.nlm.nih.gov/pubmed?term=Hurwitz%20S%5BAuthor%5D&cauthor=true&cauthor_uid=23444882), [Kelly B](http://www.ncbi.nlm.nih.gov/pubmed?term=Kelly%20B%5BAuthor%5D&cauthor=true&cauthor_uid=23444882), [Powis D](http://www.ncbi.nlm.nih.gov/pubmed?term=Powis%20D%5BAuthor%5D&cauthor=true&cauthor_uid=23444882), [Smyth R](http://www.ncbi.nlm.nih.gov/pubmed?term=Smyth%20R%5BAuthor%5D&cauthor=true&cauthor_uid=23444882), [Lewin T](http://www.ncbi.nlm.nih.gov/pubmed?term=Lewin%20T%5BAuthor%5D&cauthor=true&cauthor_uid=23444882).

University of Newcastle , Australia.

Abstract

Background: There is a lack of consensus regarding the qualities possessed by the ideal doctor, and very limited research regarding the views of medical students on these qualities. Aims: To investigate the views of commencing medical students regarding the desirable qualities of doctors. Methods: A survey containing a set of proposed desirable qualities of doctors identified from the existing literature was completed by 158 first-year medical students. Results: The survey had a 75% response rate. Students rated the individual qualities of empathy, motivation to be a doctor, good verbal communication, ethically sound, integrity and honesty as the most important. A factor analysis identified six categories of qualities: methodical processing, cognitive capacity, people skills, generic work ethic, role certainty and warmth. Significant differences in factor scores were found across subgroups of students (international and domestic students, with and without prior tertiary studies) on the following factors: methodical processing, which was scored highest by domestic students with prior tertiary studies, cognitive capacity, which was scored highest by domestic students without prior tertiary studies and generic work ethic, which was scored highest by international students. Conclusions: Medical students identified a range of desirable personal qualities of a doctor which varied according to student characteristics, including their prior educational experience. Future research aiming to define such desirable qualities should include a broader range of stakeholders, including students at different training levels and institutions.

PMID: 23444882 [PubMed - as supplied by publisher]

[Related citations](http://www.ncbi.nlm.nih.gov/pubmed?linkname=pubmed_pubmed&from_uid=23444882)

2. Med Teach. 2013 Feb 27. [Epub ahead of print]

[Twelve tips for making the best use of feedback.](http://www.ncbi.nlm.nih.gov/pubmed/23444890)

[van der Leeuw RM](http://www.ncbi.nlm.nih.gov/pubmed?term=van%20der%20Leeuw%20RM%5BAuthor%5D&cauthor=true&cauthor_uid=23444882), [Slootweg IA](http://www.ncbi.nlm.nih.gov/pubmed?term=Slootweg%20IA%5BAuthor%5D&cauthor=true&cauthor_uid=23444882).

University of Amsterdam , The Netherlands.

Abstract

Background: Feedback is generally regarded as crucial for learning. We focus on feedback provided through instruments developed to inform self-assessment and support learners to improve performance. These instruments are being used commonly in medical education, but they are ineffective if the feedback is not well received and put into practice. Methods: The authors formulated twelve tips to make the best use of feedback based on widely cited publications on feedback. To include recent developments and hands-on experiences in the field of medical education, the authors discussed the tips with their research team consisting of experts in the field of medical education and professional performance, to reach agreement on the most practical strategies. Results: When utilizing feedback for performance improvement, medical students, interns, residents, clinical teachers and practicing physicians could make use of the twelve tips to put feedback into practice. The twelve tips provide strategies to reflect, interact and respond to feedback one receives through (validated) feedback instruments. Conclusions: Since the goal of those involved in medical education and patient care is to perform at the highest possible level, we offer twelve practical tips for making the best use of feedback in order to support learners of all levels.

PMID: 23444890 [PubMed - as supplied by publisher]

[Related citations](http://www.ncbi.nlm.nih.gov/pubmed?linkname=pubmed_pubmed&from_uid=23444890)

3. Med Teach. 2013 Feb 22. [Epub ahead of print]

[Passing the torch: A proposed amendment to "A Physician Charter"](http://www.ncbi.nlm.nih.gov/pubmed/23427830)

[Angoff NR](http://www.ncbi.nlm.nih.gov/pubmed?term=Angoff%20NR%5BAuthor%5D&cauthor=true&cauthor_uid=23444882), [Fortin AH 6th](http://www.ncbi.nlm.nih.gov/pubmed?term=Fortin%20AH%206th%5BAuthor%5D&cauthor=true&cauthor_uid=23444882).

Yale University , USA.

Abstract

A Physician Charter has received widespread attention throughout the medical community since its publication in 2002. The Charter, which lays out three principles and 10 commitments that "reaffirm the fundamental and universal principles and values of medical professionalism …" omits an essential principle and its corollary commitment. That fourth principle, essential to the successful perpetuation of the aims of the Charter, we call the Principle of Generativity: Physicians must contribute to the education and development of the next generation of practitioners in order to ensure that the profession lives on and thrives, grounded in its fundamental professional values. Only by emphasizing our obligation to teach professional values to the next generation of physicians, can we expect to "pass the torch" of the profession.

PMID: 23427830 [PubMed - as supplied by publisher]

[Related citations](http://www.ncbi.nlm.nih.gov/pubmed?linkname=pubmed_pubmed&from_uid=23427830)

4. Med Teach. 2013 Feb 20. [Epub ahead of print]

[Patients as educators: Interprofessional learning for patient-centred care.](http://www.ncbi.nlm.nih.gov/pubmed/23425118)

[Towle A](http://www.ncbi.nlm.nih.gov/pubmed?term=Towle%20A%5BAuthor%5D&cauthor=true&cauthor_uid=23444882), [Godolphin W](http://www.ncbi.nlm.nih.gov/pubmed?term=Godolphin%20W%5BAuthor%5D&cauthor=true&cauthor_uid=23444882).

University of British Columbia , Canada.

Abstract

Background: Patients with chronic conditions have unique expertise that enhances interprofessional education. Although their active involvement in education is increasing, patients have minimal roles in key educational tasks. A model that brings patients and students together for patient-centred learning, with faculty playing a supportive role, has been described in theory but not yet implemented. Aims: To identify issues involved in creating an educational intervention designed and delivered by patients and document outcomes. Method: An advisory group of community members, students and faculty guided development of the intervention (interprofessional workshops). Community educators (CEs) were recruited through community organizations with a healthcare mandate. Workshops were planned by teams of key stakeholders, delivered by CEs, and evaluated by post-workshop student questionnaires. Results: Workshops were delivered by CEs with epilepsy, arthritis, HIV/AIDS and two groups with mental health problems. Roles and responsibilities of planning team members that facilitated control by CEs were identified. Ten workshops attended by 142 students from 15 different disciplines were all highly rated. Workshop objectives defined by CEs and student learning both closely matched dimensions of patient-centredness. Conclusions: Our work demonstrates feasibility and impact of an educational intervention led by patient educators facilitated but not controlled by faculty.

PMID: 23425118 [PubMed - as supplied by publisher]

[Related citations](http://www.ncbi.nlm.nih.gov/pubmed?linkname=pubmed_pubmed&from_uid=23425118)

5. Med Educ. 2013 Feb;47(2):198-209. doi: 10.1111/medu.12088.

[Divergence in student and educator conceptual structures during auscultation training.](http://www.ncbi.nlm.nih.gov/pubmed/23323659)

[Brydges R](http://www.ncbi.nlm.nih.gov/pubmed?term=Brydges%20R%5BAuthor%5D&cauthor=true&cauthor_uid=23444882), [Peets A](http://www.ncbi.nlm.nih.gov/pubmed?term=Peets%20A%5BAuthor%5D&cauthor=true&cauthor_uid=23444882), [Issenberg SB](http://www.ncbi.nlm.nih.gov/pubmed?term=Issenberg%20SB%5BAuthor%5D&cauthor=true&cauthor_uid=23444882), [Regehr G](http://www.ncbi.nlm.nih.gov/pubmed?term=Regehr%20G%5BAuthor%5D&cauthor=true&cauthor_uid=23444882).

Department of Medicine, University of Toronto, Toronto, Ontario, Canada. ryan.brydges@utoronto.ca

Abstract

CONTEXT: Simulation-based medical education allows trainees to engage in self-regulated learning (SRL), yet research aimed at elucidating the mechanisms of SRL in this context is relatively absent. We compared 'unguided' SRL with 'directed' SRL (DSRL), wherein learners followed an expert-designed booklet. METHODS: Year 1 medical students (n = 37) were randomly assigned to practise identifying seven cardiac murmurs using a simulator and video only (SRL group) or a simulator and video plus the booklet (DSRL group). All participants completed a 22-item test 3 weeks later. To compare interventions, we analysed students' diagnostic accuracy. As a novel source of evidence, we documented how participants autonomously sequenced the seven murmurs during initial and delayed practice sessions. In addition, we surveyed clinical educators (n = 17) to find out how they would sequence their teaching of these murmurs. RESULTS: The DSRL group used 50% more training time than the SRL group (p < 0.001). The groups' diagnostic accuracy, however, did not differ significantly on the post-test, retention test or transfer test items (p > 0.12). Despite practising with the expert-defined 'timing-based' approach to murmur diagnosis (i.e. systolic versus diastolic), 84% of DSRL participants implemented a location-based approach (i.e. practising aortic murmurs separately from mitral murmurs) during a second, unguided practice session. Notably, most SRL participants used that same approach spontaneously. By contrast, clinical educators were split in their use of the timing-based (n = 10) and the location-based (n = 6) approaches. Chi-squared analyses suggested educators' conceptions for organising murmurs differed significantly from students' conceptions. CONCLUSIONS: Contrary to our predictions, directing students' SRL produced no additional benefit and increased their practice time. Our findings suggest one potential source of these results was a divergence between student and educator conceptions for structuring the practice of cardiac auscultation skills. This phenomenon has not been well articulated in the medical education literature, and may have important implications in many (especially technology-mediated) educational contexts.

PMID: 23323659 [PubMed - in process]

**6. Med Educ. 2013 Feb;47(2):122-3. doi: 10.1111/medu.12112.**

[Education for clinical relationships: pedagogy and play.](http://www.ncbi.nlm.nih.gov/pubmed/23323649)

[Salmon P](http://www.ncbi.nlm.nih.gov/pubmed?term=Salmon%20P%5BAuthor%5D&cauthor=true&cauthor_uid=23444882).

University of Liverpool, Division of Clinical Psychology, Liverpool, UK. psalmon@liv.ac.uk

Comment on

•  [Can the science of communication inform the art of the medical humanities?](http://www.ncbi.nlm.nih.gov/pubmed/23323651) [Med Educ. 2013]

PMID: 23323649 [PubMed - in process]

**7. Acad Med. 2013 Feb;88(2):206-13. doi: 10.1097/ACM.0b013e31827c562d.**

[Advanced ultrasound training for fourth-year medical students: a novel training program at the ohio state university college of medicine.](http://www.ncbi.nlm.nih.gov/pubmed/23269306)

[Bahner DP](http://www.ncbi.nlm.nih.gov/pubmed?term=Bahner%20DP%5BAuthor%5D&cauthor=true&cauthor_uid=23444882), [Royall NA](http://www.ncbi.nlm.nih.gov/pubmed?term=Royall%20NA%5BAuthor%5D&cauthor=true&cauthor_uid=23444882)

Dr. Bahner is associate professor, director of ultrasound emergency medicine, and emergency medicine ultrasound fellowship director, Department of Emergency Medicine, The Ohio State University College of Medicine, Columbus, Ohio. Dr. Royall is a resident, Department of Surgery, The Orlando Health, and resident instructor, University of Central Florida College of Medicine, Orlando, Florida.

Abstract

Ultrasound training and education in medical schools is rare, and the foci of current ultrasound curricula are limited. There is a significant need for advanced ultrasound training models in medical school curricula to reduce educational burdens for physician residency programs and improve overall physician competency.The authors describe and evaluate the advanced ultrasound training program developed at The Ohio State University College of Medicine (OSU COM). The OSU COM program is a longitudinal advanced ultrasound curriculum for fourth-year medical students pursuing specialties that require frequent use of focused ultrasound. One hundred fifty student participants have completed the yearlong program to date. Participants engage in didactic lectures, journal club sessions, hands-on training, teaching and patient-modeling activities, and complete a final project. Experienced Ohio State University Medical Center faculty are recruited from specialties that frequently use ultrasound (e.g., emergency medicine, internal medicine, obstetrics-gynecology). A multimodal instructional assessment approach ensures that ultrasound training yields experience with cognitive, behavioral, and constructive learning components. The authors discuss the benefits of the program as well as its challenges and future directions.The advanced ultrasound training program at OSU COM demonstrates a novel approach to providing ultrasound training for medical students, offering a feasible model for meeting training guidelines without increasing the educational requirements for residency programs.

PMID: 23269306 [PubMed - in process]

**8. Acad Med. 2013 Feb;88(2):192-7. doi: 10.1097/ACM.0b013e31827c5352.**

[YouTube as a Platform for Publishing Clinical Skills Training Videos.](http://www.ncbi.nlm.nih.gov/pubmed/23269305)

[Topps D](http://www.ncbi.nlm.nih.gov/pubmed?term=Topps%20D%5BAuthor%5D&cauthor=true&cauthor_uid=23444882), [Helmer J](http://www.ncbi.nlm.nih.gov/pubmed?term=Helmer%20J%5BAuthor%5D&cauthor=true&cauthor_uid=23444882), [Ellaway R](http://www.ncbi.nlm.nih.gov/pubmed?term=Ellaway%20R%5BAuthor%5D&cauthor=true&cauthor_uid=23444882).

Dr. Topps is professor, Department of Family Medicine, University of Calgary, Calgary, Alberta, Canada. Dr. Helmer is assistant professor of clinical sciences, Northern Ontario School of Medicine, Sudbury, Ontario, Canada. Dr. Ellaway is assistant dean of curriculum and planning, Northern Ontario School of Medicine, Sudbury, Ontario, Canada.

The means to share educational materials have grown considerably over the years, especially with the multitude of Internet channels available to educators. This article describes an innovative use of YouTube as a publishing platform for clinical educational materials.The authors posted online a series of short videos for teaching clinical procedures anticipating that they would be widely used. The project Web site attracted little traffic, alternatives were considered, and YouTube was selected for exploration as a publication channel. YouTube's analytics tools were used to assess uptake, and viewer comments were reviewed for specific feedback in support of evaluating and improving the materials posted.The uptake was much increased with 1.75 million views logged in the first 33 months. Viewer feedback, although limited, proved useful. In addition to improving uptake, this approach also relinquishes control over how materials are presented and how the analytics are generated. Open and anonymous access also limits relationships with end users.In summary, YouTube was found to provide many advantages over self-publication, particularly in terms of technical simplification, increased audience, discoverability, and analytics. In contrast to the transitory interest seen in most YouTube content, the channel has seen sustained popularity. YouTube's broadcast model diffused aspects of the relationship between educators and their learners, thereby limiting its use for more focused activities, such as continuing medical education.

PMID: 23269305 [PubMed - in process]

**9. Acad Med. 2013 Feb;88(2):240-245.**

["Being the Best We Can Be": Medical Students' Reflections on Physician Responsibility in the Social Media Era.](http://www.ncbi.nlm.nih.gov/pubmed/23269290)

[Lie D](http://www.ncbi.nlm.nih.gov/pubmed?term=Lie%20D%5BAuthor%5D&cauthor=true&cauthor_uid=23444882), [Trial J](http://www.ncbi.nlm.nih.gov/pubmed?term=Trial%20J%5BAuthor%5D&cauthor=true&cauthor_uid=23444882), [Schaff P](http://www.ncbi.nlm.nih.gov/pubmed?term=Schaff%20P%5BAuthor%5D&cauthor=true&cauthor_uid=23444882), [Wallace R](http://www.ncbi.nlm.nih.gov/pubmed?term=Wallace%20R%5BAuthor%5D&cauthor=true&cauthor_uid=23444882), [Elliott D](http://www.ncbi.nlm.nih.gov/pubmed?term=Elliott%20D%5BAuthor%5D&cauthor=true&cauthor_uid=23444882).

Dr. Lie is clinical professor of family medicine and course director for the Professionalism and the Practice of Medicine course, Keck School of Medicine of the University of Southern California, Los Angeles, California. Dr. Trial is assistant professor of medicine, Keck School of Medicine of the University of Southern California, Los Angeles, California. Dr. Schaff is associate professor of clinical pediatrics and family medicine, associate dean for curriculum, and director, Program in Medical Humanities, Arts, and Ethics, Keck School of Medicine of the University of Southern California, Los Angeles, California. Dr. Wallace is clinical associate professor of obstetrics-gynecology, Keck School of Medicine of the University of Southern California, Los Angeles, California. Dr. Elliott is professor of clinical pediatrics and associate dean for student affairs, Keck School of Medicine of the University of Southern California, Los Angeles, California.

Abstract: PURPOSE: To examine attitudes, self-reported behaviors, and intended actions related to medical students' use of online social media after an educational intervention. METHOD: In 2011, 180 first-year medical students at the Keck School of Medicine participated in a required two-hour session on the relevance of online social media use to professionalism. Students submitted postsession written reflections about their online presence and professional roles. The authors qualitatively analyzed and coded these reflections for emerging themes. They also examined postsession evaluations and conducted a four-month follow-up survey to identify changes in students' online social networking behaviors. RESULTS: All 180 students submitted written reflections and postsession evaluations. The authors identified 10 theme categories within three domains (immediate action, intended future action, value change) from the reflections. The most common themes were "role awareness" (144/539), "did nothing" (94/539), and "intention to edit" (84/539). On a scale of 1 to 5, students rated the overall session quality at 3.92 (standard deviation 0.28). Sixty-four percent (115/180) of the students responded to the follow-up survey. Of those, 40% (46/115) reported editing or changing their Web presence after the session, and 24% (28/115) anticipated spending less time on online social networking. CONCLUSIONS: Attending a required session in a professionalism course led to thoughtful reflection, increased professional role awareness, and intention to edit and monitor future online presence among first-year medical students. After four months, students reported continued monitoring and editing of their online presence. Future studies should examine whether reinforcement throughout training is needed to maintain vigilance.

PMID: 23269290 [PubMed - as supplied by publisher]

**January, 2013 Journal Watch PubMed Results**

 1. Acad Med. 2013 Jan;88(1):102-10. doi: 10.1097/ACM.0b013e318277d5b2.

Physician shadowing: a review of the literature and proposal for guidelines. <<http://www.ncbi.nlm.nih.gov/pubmed/23165280>>

Kitsis EA, Goldsammler M,

Abstract

PURPOSE: Premedical students commonly shadow physicians to gain an understanding of what careers in medicine entail. The authors reviewed the literature to explore (1) whether shadowing achieves this goal consistently and effectively, (2) the ethical issues involved, and (3) other reasons that individuals shadow physicians. METHOD: The authors searched the MEDLINE database via Ovid for English-language articles published from 1948 to March 2011. Eligible articles described physician shadowing programs and/or assessed the value of physician shadowing independently or in comparison with other educational methods. RESULTS: Of 770 articles identified, 13 articles about physician shadowing programs met inclusion criteria. Two of the 13 programs involved shadowing only, whereas 11 included other educational initiatives. Participants varied; shadowers included students (high school, college, medical school), recent medical school graduates, or international medical graduates. Few studies addressed shadowing by premedical students. Most studies involved programs outside the United States. Shadowing program objectives and characteristics differed. Data reported from focus groups, interviews, and surveys suggest that shadowing experiences generally increased participants' interest in medicine (or a specialty) or improved participants' confidence in new position. Some articles raised ethical and practical concerns related to shadowing. CONCLUSIONS: The few shadowing programs described in the literature were heterogeneous and often involved other activities. Further research is warranted; objective outcomes measures would be useful. The authors propose developing guidelines and introducing a code of conduct for premedical students, to enhance the consistency of shadowing experiences and address ethical and practical considerations.

PMID: 23165280 [PubMed - in process]

2. Acad Med. 2013 Jan;88(1):26-34.

The Attributes of the Clinical Trainer as a Role Model: A Systematic

Review. <<http://www.ncbi.nlm.nih.gov/pubmed/23165277>>

Jochemsen-van der Leeuw

HG, van Dijk N, van Etten-Jamaludin FS, Wieringa-de Waard M

Abstract: PURPOSE: Medical trainees (interns and residents) and their clinical trainers need to be aware of the differences between positive and negative role modeling to ensure that trainees imitate and that trainers demonstrate the professional behavior required to provide high-quality patient care. The authors systematically reviewed the medical and medical education literature to identify the attributes characterizing clinical trainers as positive and negative role models for trainees. METHOD: The authors searched the MEDLINE, EMBASE, ERIC, and PsycINFO databases from their earliest dates until May 2011. They included quantitative and qualitative original studies, published in any language, on role modeling by clinical trainers for trainees in graduate medical education. They assessed the methodological quality of and extracted data from the included studies, using predefined forms. RESULTS: Seventeen articles met inclusion criteria. The authors divided attributes of role models into three categories: patient care qualities, teaching qualities, and personal qualities. Positive role models were frequently described as excellent clinicians who were invested in the doctor-patient relationship. They inspired and taught trainees while carrying out other tasks, were patient, and had integrity. These findings confirm the implicit nature of role modeling. Positive role models' appearance and scientific achievements were among their least important attributes. Negative role models were described as CONCLUSIONS: The identified attributes may help trainees recognize which aspects of the clinical trainer's professional behavior to imitate, by adding the important step of apperception to the process of learning professional competencies through observation.

PMID: 23165277 [PubMed - as supplied by publisher]

3. Acad Med. 2013 Jan;88(1):35-43. doi: 10.1097/ACM.0b013e318276ca9b.

Outcomes of different clerkship models: longitudinal integrated, hybrid, and block. <<http://www.ncbi.nlm.nih.gov/pubmed/23165275>>

Teherani A, Irby DM, Loeser H.

Abstract PURPOSE: To examine student perceptions and learning outcomes of three different third-year clerkship models: a yearlong, longitudinal, integrated clerkship (LIC); six-month clerkships with continuity (hybrid); and traditional, discipline-specific block clerkships (BCs). METHOD: The authors compared the perceptions regarding the clerkship year and the hidden curriculum, as well as the pre- and postclerkship academic performance, of third-year medical students participating in LIC, hybrid, and BC models between 2006 and 2010. RESULTS: Generally, LIC students rated the following clerkship experiences higher than did the hybrid and BC students: faculty teaching, faculty observation of clinical skills, feedback, and the clerkship overall. Students in the LIC observed more positive role-modeling behaviors and had more patient-centered experiences than BC students. All students preferred to see patients more than once, work within a consistent site or system, and work with a stable group of peers and faculty mentors over time. Whereas students in both the LIC and the hybrid models outperformed their BC counterparts in clinical skills, student performance on the U.S. Medical Licensing Exam Step 2 (clinical knowledge) was equivalent across models. CONCLUSIONS: Key differences in student experiences and outcomes between the continuity clerkship models (LIC and hybrid) and BCs reinforce the literature and the educational framework for continuity in clinical learning. The benefits to student outcomes seem to increase with greater

opportunities for continuity.

PMID: 23165275 [PubMed - in process]

4. Acad Med. 2013 Jan;88(1):44-48.

How Do Gender and Anxiety Affect Students' Self-Assessment and Actual Performance on a High-Stakes Clinical Skills Examination? <<http://www.ncbi.nlm.nih.gov/pubmed/23165273>>

Colbert-Getz JM, Fleishman C, Jung J, Shilkofski N.

Abstract PURPOSE: Research suggests that medical students are not accurate in self-assessment, but it is not clear whether students over- or underestimate their skills or how certain characteristics correlate with accuracy in self-assessment. The goal of this study was to determine the effect of gender and anxiety on accuracy of students' self-assessment and on actual performance in the context of a high-stakes assessment. METHOD: Prior to their fourth year of medical school, two classes of medical students at Johns Hopkins University School of Medicine completed a required clinical skills exam in fall 2010 and 2011, respectively. Two hundred two students rated their anxiety in anticipation of the exam and predicted their overall scores in the history taking and physical examination performance domains. A self-assessment deviation score was calculated by subtracting each student's predicted score from his or her score as rated by standardized patients. RESULTS: When students self-assessed their data gathering performance, there was a weak negative correlation between their predicted scores and their actual scores on the examination. Additionally, there was an interaction effect of anxiety and gender on both self-assessment deviation scores and actual performance. Specifically, females with high anxiety were more accurate in self-assessment and achieved higher actual scores compared with males with high anxiety. No differences by gender emerged for students with moderate or low anxiety. CONCLUSIONS: Educators should take into account not only gender but also the role of emotion, in this case anxiety, when planning interventions to help improve accuracy of students' self-assessment.

PMID: 23165273 [PubMed - as supplied by publisher]

5. Acad Med. 2013 Jan;88(1):97-101. doi:

10.1097/ACM.0b013e31827653f5.

Perspective: teaching and mentoring the history of medicine: an oslerian

perspective.<hBryan

CS<<http://www.ncbi.nlm.nih.gov/pubmed?term=Bryan%20CS%5BAuthor%5D&cauthor=true&cauthor_uid=23165280>>,

Longo

LD<<http://www.ncbi.nlm.nih.gov/pubmed?term=Longo%20LD%5BAuthor%5D&cauthor=true&cauthor_uid=23165280>>.

Dr. Bryan is Heyward Gibbes Distinguished Professor of Medicine Emeritus, University of South Carolina School of Medicine, Columbia, South Carolina. Dr. Longo is Bernard D. Briggs Distinguished Professor of Physiology and director, Center for Perinatal Biology, Loma Linda University School of Medicine, Loma Linda, California.

Abstract

Many predict a takeover (seen by some as hostile, and by others as inadvertent) of professional virtues and values by government and capitalism. One source of professional virtues and values consists of lessons from the history of medicine as taught and mentored by Sir William Osler. Some medical schools have required courses in medical history, but proposing a new requirement would probably be a tough sell to most curriculum committees. Osler himself argued against compulsory courses in medical history. The authors propose that exposing medical students to the history of medicine promotes at least two of the seven types of professionalism identified by Hafferty and Castellani. Exposure to the evolution of medical science and to exemplary physicians of bygone eras promotes nostalgic professionalism, which, although in some ways suspect and naïve, fosters a sense of belonging and solidarity as members of a profession, not a trade, whereas exposure to the evolution of medicine as a public service, to the sad history of health care disparities, and to patients' perspectives promotes activist professionalism, fostering a sense of civic responsibility and opposition to excessive commercialism.Steps to promote such exposure include (1) identifying faculty, community physicians, and others interested in the history of medicine, (2) including the history of medicine in faculty development programs, (3) considering a segment in the history of medicine during the introduction to each major course, (4) sponsoring history clubs, and (5) promoting environments favorable for mentor-protégé relationships for faculty and students with further interest.

PMID: 23165269 [PubMed - in process]

6. Med Educ. 2013 Jan;47(1):109-19. doi:

10.1111/j.1365-2923.2012.04287.x.

The consequences of authentic early experience for medical students:

creation of mētis

Keele University Medical School, Keele University, Keele, UK School of

Humanities & Social Science, University of Newcastle, Callaghan, NSW,

Australia ARUK Primary Care Centre, Keele University, Keele, UK.

Abstract

Context  Authentic early experience (AEE) describes experiences provided to new medical students to undertake 'human contact' to enhance learning. Although the concept of AEE is not new, and was commonplace prior to the Flexner Report of 1910, little is known about how or why meaning and knowledge are constructed through early student placements in medical, social and voluntary workplaces. Variance among settings means AEE is a collection of non-uniform interventions which require students to make repeated transitions between different workplaces and their university institution. The purpose of this paper is to develop theory in this context. Methods  We report on a study undertaken in a UK medical school using interviews and discussion groups to generate data from students, workplace supervisors and school faculty staff. We used narrative analysis to access knowledge and meaning construction, in combination with analytic tools drawn from thematic and interpretative approaches to phenomena. We sought to refine theoretical understanding through the application of mētis, a socio-cultural theory novel to the field of medical education. Results  Scott's concept of mētis provides a useful theoretical framework for understanding how AEE works for students in terms of their creation of meaning and how they choose to use it in relation to formally recognized knowledge. Knowledge and meaning, generated as a consequence of AEE, contained dichotomies and paradoxes. Students improvised, in the face of unpredictability and uncertainty, to create a form of mētis that allowed them to handle the perceived competing demands of AEE settings and the medical school. Discussion  We demonstrate how meaning making can be conceived of as student mētis arising from social processes in students' learning interactions. We suggest that the development of collaborative working with students could potentiate positive forms of student mētis, thereby maximising desirable educational consequences. Further work is required to establish effective ways to do this.

PMID: 23278830 [PubMed - in process]

7. Med Educ. 2013 Jan;47(1):97-108. doi:

10.1111/j.1365-2923.2012.04324.x.

Cloak of compassion, or evidence of elitism? An empirical analysis of

white coat ceremonies.<<http://www.ncbi.nlm.nih.gov/pubmed/23278829>>

Karnieli-Miller O, Frankel RM, Inui TS

Department of Medical Education, Sackler School of Medicine, Tel Aviv

University, Tel Aviv, Israel Department of Community Mental Health,

University of Haifa, Haifa, Israel Division of General Internal Medicine

and Geriatrics, Department of Medicine, Regenstrief Institute, Indiana

University School of Medicine, Indianapolis, Indiana, USA.

Abstract

Context  White coat ceremonies (WCCs) are widely prevalent as a celebration of matriculation in medical schools. Critics have questioned whether these ceremonies can successfully combine the themes of professionalism and humanism, as well as whether the white coat is an appropriate symbol. Objectives  This study aimed to add a process of empirical assessment to the discussion of these criticisms by analyzing the content and messages communicated during these ceremonies. MethodsMultiple qualitative methods were used to discern the core meanings expressed in a sample of 18 ceremonies through the analysis of artefacts, words, phrases, statements and narratives. Out of a stratified random sample of 25 US schools of medicine conducting WCCs in 2009, 18 schools submitted video, audio and written materials. Results  All ceremonies followed the same general format, but varied in their content, messages and context. Ceremonies included five principal descriptions of what is symbolised by the white coat, including: commitment to humanistic professional care; a reminder of obligations and privileges; power; the student's need to 'grow', and the white coat as a mantle. Statements about obligations were made three times more

frequently than statements about privileges. Key words or phrases in WCCs mapped to four domains: professionalism; morality; humanism, and spirituality. Spoken narratives focused on humility and generosity. Conclusions  The WCCs studied did not celebrate the status of an elite class, but marked the beginning of educational, personal and professional formation processes and urged matriculants to develop into doctors 'worthy of trust'. The ceremonies centred on the persons entering the vocation, who were invited to affirm its calling and obligations by donning a symbolic garb, and to join an ancient and modern tradition of healing and immersion in their community. The schools' articulated construct of the white coat situated it as a symbol of humanism. This study's findings may clarify and guide schools'

choices in designing their own WCCs.

PMID: 23278829 [PubMed - in process]

8. Med Teach. 2013 Jan 18. [Epub ahead of print]

Effect of enhanced analytic reasoning on diagnostic accuracy: A randomized controlled study

Myung SJ, Kang SH, Phyo SR,Shin JS, Park WB.

Seoul National University College of Medicine , Republic of Korea.

Abstract

Background: Diagnostic error can be caused by several types of cognitive bias, which may be reversed by enhancing analytic reasoning. Aims: To evaluate whether enhancing analytic reasoning can increase diagnostic accuracy in objective structured clinical examination (OSCE) in medical students. Methods: All fourth-year medical students, randomly assigned to the analytic reasoning or control groups, undertook the OSCE with four cases using standardized patients. The analytic reasoning group was requested to list differential diagnoses and findings compatible or not compatible with each diagnosis prior to providing a diagnosis, while the control group provided a diagnosis without these processes. Mean diagnostic accuracy scores (perfect score, 4.0) from four cases of OSCE were compared between the two groups. Results: One hundred forty-five students were randomly assigned to the analytic reasoning group (n = 65) or the control group (n = 80). The baseline characteristics, including grade point average and the scores from each patient encounter, were comparable between groups. Mean diagnostic accuracy scores were significantly higher in the analytic reasoning group than in the control group (3.40 ± 0.66 versus 3.05 ± 0.98; p = 0.011). Conclusion: Enhancement of analytic reasoning may improve diagnostic accuracy in novice doctors.

PMID: 23327617 [PubMed - as supplied by publisher]

9. Med Teach. 2013;35(1):1-3. doi: 10.3109/0142159X.2013.756215.

A fresh approach to publishing and reviewing papers in health

professions education.<<http://www.ncbi.nlm.nih.gov/pubmed/23278703>>

Harden RM, Lilley P

University of Dundee , UK.

Abstract

MedEdPublish has been launched as a repository of ideas and an e-library for papers relating to education in the health professions that have not previously been published. In line with the move to open access publication, the e-library provides an easy-to-search, open access resource that addresses both a mismatch between papers meriting publication and the space available in established journals, and problems with the traditional approach to peer reviewing by an editorial board and two or three selected reviewers. It is argued that with advances in technology, the time is right to look at a fresh approach to quality control that involves the wider education community.

PMID: 23278703 [PubMed - in process]

10. Med Teach. 2013;35(1):85-96. doi: 10.3109/0142159X.2012.748887.

Epub 2012 Dec 21.

Looking back to move forward: Using history, discourse and text in medical education research: AMEE Guide No.

73.<<http://www.ncbi.nlm.nih.gov/pubmed/23259609>>

Kuper A, Whitehead C, Hodges BD.

Sunnybrook Health Sciences Centre.

Abstract

As medical education research continues to diversify methodologically and theoretically, medical education researchers have been increasingly willing to challenge taken-for-granted assumptions about the form, content and function of medical education. In this AMEE Guide we describe historical, discourse and text analysis approaches that can help researchers and educators question the inevitability of things that are currently seen as 'natural'. Why is such questioning important? By articulating our assumptions and interrogating the 'naturalness' of the status quo, one can then begin to ask why things are the way they are. Researchers can, for example, ask whether the models of medical education organization and delivery that currently seem 'natural' to them have been developed in order to provide the most benefit to students or patients - or whether they have, rather, been developed in ways that provide power to faculty members, medical schools or the medical profession as a whole. An understanding of the interplay of practices and power is a valuable tool for opening up the field to new possibilities for better medical education. The recognition that our current historical contexts for any number of contingent reasons leads inexorably to the possibility of change. For if our current ways of doing things are not, in fact, inevitable, not only can they be questioned, they can be made better; they can changed in ways that are attentive to whom they benefit, are congruent with our current beliefs about best practice and may lead to the production of better doctors.

PMID: 23259609 [PubMed - in process]

11. Med Teach. 2013;35(1):27-31. doi: 10.3109/0142159X.2012.732717.

Epub 2012 Nov 2.

Be FAIR to students: Four principles that lead to more effective

learning.<<http://www.ncbi.nlm.nih.gov/pubmed/23121246>>

Harden RM Laidlaw JM

AMEE , UK.

Abstract

A teacher is a professional not a technician. An understanding of some basic principles about learning can inform the teacher or trainer in their day-to-day practice as a teacher or a trainer. The FAIR principles are: provide feedback to the student, engage the student in active learning, individualise the learning to the personal needs of the student and make the learning relevant. Application of the principles can lead to more effective learning - the poor teacher can become a good teacher and the good teacher an excellent teacher.

PMID: 23121246 [PubMed - in process]

12. Med Teach. 2013;35(1):58-62. doi: 10.3109/0142159X.2012.731101.

Epub 2012 Oct 26.

Senior medical students as peer examiners in an

OSCE.<<http://www.ncbi.nlm.nih.gov/pubmed/23102164>>

Burgess A, Clark, Chapman R, Mellis C

Sydney Medical School - Central, The University of Sydney , Australia.

Abstract

Background: At Sydney Medical School, we have recently introduced a practice Objective Structured Clinical Examination (OSCE) where our junior medical students are assessed by the senior peers. Aim: We sought to evaluate the efficacy of the programme. Methods: The study took place in 2010 and 2011, with two cohorts of final-year students participating. A total of 40/98 (41%) of final-year students chose to participate as examiners. Following the completion of standardised marking sheets by the student examiners, the marking sheets were reviewed by a senior academic examiner, and the 'global' mark was adjusted in accordance with the marking criteria. Student examineclosed-ended questionnaire regarding their experience as an examiner. A total of 105/115 (91%) of year 2 medical students were examined in the OSCE over the two-year period. Results: The senior academic changed a total of 94 'global' marks, reducing the majority (55%) from 'Satisfactory' to 'Borderline'; 12% were reduced from 'Satisfactory' to 'Not Satisfactory' and 33% from 'Borderline' to 'Not Satisfactory'. Student questionnaire results showed a high level of engagement with their examiner experience overall, and it was regarded as a useful learning experience. Conclusion: Student examiners found peer assessment to be a very useful learning activity. However, our students need further training in how to globally assess a fellow student's overall performance objectively and to provide accurate feedback.

PMID: 23102164 [PubMed - in process]

13. Med Teach. 2013;35(1):4-7. doi: 10.3109/0142159X.2012.731098.

Epub 2012 Oct 26.

How we make good doctors into good teachers: A short course to support busy clinicians to improve their teaching skills.<<http://www.ncbi.nlm.nih.gov/pubmed/23102154>>

Foster K, Laurent R.

University of Sydney , Australia.

Abstract

Background: Doctors are expected to teach but many are reluctant through lack of training. Busy clinicians have little time to attend faculty development initiatives. We wanted to increase clinical teaching capacity locally. What we did: In response to requests from doctors lacking confidence in their teaching skills, we developed a programme tailored to the needs of working clinical teachers. The emphasis is on teaching effectively in a busy clinical environment. There are five 90 min modules: bedside teaching, effective supervision and feedback, teaching physical examination and procedures, effective lectures and facilitating development of clinical reasoning skills. The course is practical, interactive and takes place in a supportive learning environment adjacent to the workplace. A total of 81 clinicians participated in the course. Evaluation: The main outcomes were increased confidence in bedside teaching, teaching more effectively on ward rounds and reduction in need for support with teaching. Participants reported a better understanding of basic educational theory and its relevance to clinical teaching. There is increased activity in clinical teaching among past participants. Conclusions: All clinical teachers require guidance and encouragement in developing their teaching skills. An accessible, practical focused teaching course run locally by colleagues with education expertise can improve clinicians' skills and motivation

to teach.

PMID: 23102154 [PubMed - in process]

14. Med Teach. 2013;35(1):15-26. doi: 10.3109/0142159XTop five flashpoints in the assessment of teaching effectiveness.<<http://www.ncbi.nlm.nih.gov/pubmed/23102151>>

Berk RA

Johns Hopkins University , USA.

Abstract

Background: Despite thousands of publications over the past 90 years on the assessment of teaching effectiveness, there is still confusion, misunderstanding, and hand-to-hand combat on several topics that seem to pop up over and over again on listservs, blogs, articles, books, and medical education/teaching conference programs. If you are measuring teaching performance in face-to-face, blended/hybrid, or online courses, then you are probably struggling with one or more of these topics or flashpoints. Aim: To decrease the popping and struggling by providing a state-of-the-art update of research and practices and a "consumer's guide to trouble-shooting these flashpoints." Methods: Five flashpoints are defined, the salient issues and research described, and, finally, specific, concrete recommendations for moving forward are proffered. Those flashpoints are: (1) student ratings vs. multiple sources of evidence; (2) sources of evidence vs. decisions: which come first?' (3) quality of "home-grown" rating scales vs. commercially-developed scales; (4) paper-and-pencil vs. online scale administration; and (5) standardized vs. unstandardized online scale administrations. The first three relate to the sources of evidence chosen and the last two pertain to online administration issues. Results: Many medical schools/colleges and higher education in general fall far short of their potential and the available technology to comprehensively assess teaching effectiveness. Specific recommendations were given to improve the quality and variety of the sources of evidence used for formative and summative decisions and their administration procedures. Conclusions: Multiple sources of evidence collected through online administration, when possible, can furnish a solid foundation from which to infer teaching effectiveness and contribute to fair and equitable decisions about faculty contract renewal, merit pay, and promotion and tenure.

PMID: 23102151 [PubMed - in process]

15. Teach Learn Med. 2013 Jan;25(1):109-14. doi:

10.1080/10401334.2013.746166.

Abstracts from the Proceedings of the 2012 Society of Teachers of Family

Medicine (STFM) Conference on Medical Student

Education.<<http://www.ncbi.nlm.nih.gov/pubmed/23330905>>

Mendoza MD

Department of Family Medicine , University of Rochester School of

Medicine and Dentistry , Rochester , New York , USA.

Abstract

The Society of Teachers of Family Medicine (STFM; [http://www.stfm.org](http://www.stfm.org/) ) is a community of professionals devoted to teaching family medicine through undergraduate, graduate, and continuing medical education. This multidisciplinary group of physicians, educators, behavioral scientists, and researchers works to further STFM's mission of improving the health of all people through education, research, patient care, and advocacy. The STFM held its 38th Conference on Medical Student Education in Long Beach, California, from February 2 to 5, 2012. The unifying theme of the conference was meeting the demands of high-quality education in a changing health care delivery environment. Kevin Grumbach University of California-San Francisco opened the conference with a plenary presentation emphasizing the importance of educating leaders and followers for health system improvement. Throughout the conference, participants shared ideas and learned new skills in more than 70 workshops, seminars, and discussions as well as 90 educational research and curriculum evaluation papers. Finally, Jeffrey Brenner, MD, from Camden Coalition of Healthcare Providers, New Jersey concluded the conference with a plenary session discussing how a citywide coalition can improve the quality, capacity, and accessibility of healthcare for one of America's poorest cities, all while reducing overall health care costs. The STFM Education Committee selected 9 papers from the educational research and curriculum evaluation papers, felt to be of interest to readers of Teaching and Learning in Medicine. One of the papers deals with preclerkship education, three with 3rd- and 4th-year education, two with longitudinal experiences across all years of medical school, and three with assessment.

PMID: 23330905 [PubMed - in process]

16. Teach Learn Med. 2013 Jan;25(1):108. doi:

10.1080/10401334.2013.743855.

A review of "the diagnosis and treatment of the failing student

(standardized patient exam

failures)".<<http://www.ncbi.nlm.nih.gov/pubmed/23330904>>

Pangaro L

a Bethesda , Maryland.

PMID: 23330904 [PubMed - in process]

17. Teach Learn Med. 2013 Jan;25(1):97-102. doi:

10.1080/10401334.2012.741544.

Developing a peer-mentor program for medical

students.<<http://www.ncbi.nlm.nih.gov/pubmed/23330902>>

Taylor JS, Faghri S, Aggarwal, Zeller K, Dollase R Reis SP.

Office of Medical Education , Alpert Medical School , Providence , Rhode Island , USA.

Abstract

Background: Doctoring is a 2-year preclinical course designed to teach medical students fundamental clinical skills. Purpose: We designed, implemented, and evaluated an innovative and cost-effective peer-mentoring program embedded within Doctoring. Our Teaching Academy (TA) included a formal orientation for teaching "Fellows." Methods: During academic years 2008-09 and 2009-10, 2nd-year students were systematically selected by course faculty and then trained as TA Fellows to peer-mentor 1st-year students. Both TA Fellows and 1st-year medical students reported a significant increase of confidence in their ability to provide feedback (p < .001). First-year students reported a significant increase of confidence in their ability to conduct a medical interview and perform a physical exam (p < .001 for each). Conclusions: Student participation in a formal peer-mentor program embedded within a clinical skills course significantly increased, for both teachers and learners, confidence in their skills. Our program is easily transferrable to other courses and institutions.

PMID: 23330902 [PubMed - in process]

18. Teach Learn Med. 2013 Jan;25(1):84-8. doi:

10.1080/10401334.2012.741535.

Teaching medical students ultrasound to measure liver size: comparison

with experienced clinicians using physical examination

alone.<<http://www.ncbi.nlm.nih.gov/pubmed/23330900>>

Mouratev

G, Howe D, Hoppmann R, Poston MB, Reid R, Varnadoe J, Smith S, McCallum B,

Rao V, Demarco P.

Department of Internal Medicine , University of South Carolina School of Medicine , Columbia , South Carolina , USA.

Abstract

Background: Ultrasound is increasingly recognized as a valuable addition to medical school curriculum. Purpose: In this study, we tested the ability of rising second year students to learn and conduct an ultrasound examination of vertical liver span at the point of care. Methods: Six patients from a GI clinic volunteered to have their liver size measured. Ten students were trained to measure vertical liver span with ultrasound. Four physicians were recruited to measure liver span with standard methods. Student and physician measurements were compared to each other and to a reference ultrasound measurement for accuracy and variability. Results: Compared to the reference, students overestimated liver size an average of 1.5 cm. Physicians underestimated liver size an average of 6.7 cm. Variance in student measurements for each patient was 10% to 17% and among physicians 20% to 50%. Conclusion: With limited instruction and clinical experience medical students can obtain liver

size measurements with ultrasound that are more accurate and have less variability than those by physicians using physical examination. Given the ease with which students can learn to use ultrasound and the teaching and clinical value of ultrasound, ultrasound should be considered as a standard of medical education in the future.

PMID: 23330900 [PubMed - in process]

19. Teach Learn Med. 2013 Jan;25(1):71-6. doi:

10.1080/10401334.2012.741541.

Grade inflation in the internal medicine clerkship: a national survey. <<http://www.ncbi.nlm.nih.gov/pubmed/23330898>>

Fazio SB, Papp KK, Torre DM, Defer TM.

a Department of Medicine , Beth Israel Deaconess Medical Center, Harvard

Medical School , Boston , Massachusetts , USA.

Abstract

Background: Grade inflation is a growing concern, but the degree to which it continues to exist in 3rd-year internal medicine (IM) clerkships is unknown. Purpose: The authors sought to determine the degree to which grade inflation is perceived to exist in IM clerkships in North American medical schools. Methods: A national survey of all Clerkship Directors in Internal Medicine members was administered in 2009. The authors assessed key aspects of grading. Results: Response rate was 64%. Fifty-five percent of respondents agreed that grade

inflation exists in the Internal Medicine clerkship at their school. Seventy-eight percent reported it as a serious/somewhat serious problem, and 38% noted students have passed the IM clerkship at their school who should have failed. Conclusions: A majority of clerkship directors report that grade inflation still exists. In addition, many note students who passed despite the clerkship director believing they should have failed. Interventions should be developed to address both of these problems.

PMID: 23330898 [PubMed - in process]

20. Teach Learn Med. 2013 Jan;25(1):31-8. doi:

10.1080/10401334.2012.741537.

Interrater reliability of an oral case presentation rating tool in a pediatric clerkship. <<http://www.ncbi.nlm.nih.gov/pubmed/23330892>>

Lewin LO, Beraho L, Dolan S, Millstein L, Bowman D.

Department of Pediatrics , University of Maryland School of Medicine, Baltimore, Maryland , USA.

Abstract

Background: Composing and delivering effective oral case presentations is an important skill for medical students to learn, but the large variety of patients and presenting problems makes teaching and evaluating this skill complex. Feducators to use, and those that are described are not well studied. Purpose: The authors describe the development of the Patient Presentation Rating tool and the study to establish its interrater reliability. Methods: Three raters reviewed 15 recorded new patient presentations delivered by 3rd-year medical students on their pediatrics clerkship. Intraclass correlation coefficients were used to determine the interrater reliability of the tool as a whole, its subsections, and each individual item. Results: The tool was found to reliably rate the technical aspects of presenting patients as well as several aspects of clinical reasoning embedded in that process. Conclusions: The Patient Presentation Rating tool is a reliable instrument for evaluating medical students' oral patient presentations.

PMID: 23330892 [PubMed - in process]

21. Teach Learn Med. 2013 Jan;25(1):10-4. doi:

10.1080/10401334.2012.741538.

The Required Written History and Physical is Alive, but Not Entirely

Well, in Internal MedicineClerkships. <<http://www.ncbi.nlm.nih.gov/pubmed/23330889>>

Ratcliffe TA, Hanson JL, Hemmer PA, Hauer KE, Papp KK, Denton GD.

Department of Medicine , Uniformed Services University of the Health Sciences , Bethesda , Maryland , USA.

Abstract

Background: Effective written communication is a core competency for medical students, but it is unclear whether or how this skill is evaluated in clinical clerkships. Purpose: This study identifies current requirements and practices regarding required written work during internal medicine clerkships. Methods: In 2010, Clerkship Directors of Internal Medicine (CDIM) surveyed its institutional members; one section asked questions about students' written work. Results were compared to similar, unpublished CDIM 2001 survey questions. Results: Requirements for student-written work were nearly universal (96% in 2001 and 100% in

2010). Only 23% used structured evaluation forms and 16% reported written work was weighted as a percentage of the final grade, although 72% of respondents reported that written work was "factored" into global ratings. Conclusions: Despite near universal requirements for student written work, structured evaluation was not commonly performed, raising concern about the validity of factoring these assessments into grades.

PMID: 23330889 [PubMed - in process]