



E-learning = inequity in learning?

Anis Fuad, Chien-Yeh Hsu & Aprisa Chrysantina

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LETTERS TO THE EDITOR

Clerkships do not improve recognition of patient hazards by advanced medical students during chart review

Dear Sir

Patient safety has been receiving increasingly more attention in the last two decades. However, research on patient safety issues during medical school training is scarce. Some patterns of patient hazards (especially diagnostic errors, medication errors, nosocomial infections) constitute a large fraction of patient hazards. Chart review by specially trained physicians is the gold standard for identification of some of these common patient hazards. Thus, a routine screening for common patient hazards during ward rounds might improve patient safety. Since chart review is not commonly taught in most medical schools, we investigated whether advanced medical students acquire the skill to identify patient hazards during chart review *en passant* (in passing) during clerkships.

A total of 128 fifth-year medical students were asked to review fictional standardized patient charts with 12 common patient hazards. The students' notes were rated by two blinded raters using a checklist. We asked the students how many weeks they had spent in clerkships in various specialties, particularly internal medicine, surgery and general medicine.

The students reported to have spent 11 ± 4 weeks in clerkships so far. In our study, the students identified only 17%, IQR = 8–30% of the patient hazards. There was no significant correlation between the number of weeks spent in clerkships and identified patient hazards. Only students who reported to have completed at least one chart review previously on their own ($n=13$, 10.2% of our study sample) identified more patient hazards than students who had never completed a chart review (29%, IQR = 19–43% versus 17%, IQR = 8–25%, $p=0.02$). It is unclear, whether these students improved their recognition of patient hazards during the clerkship or whether the students who perform chart review during clerkships constitute a different sample compared to students who do not perform chart review. We therefore conclude that unstructured clerkships do not contribute significantly to identification of patient hazards by advanced medical students during chart review. A specific training may be warranted.

Nora Celebi, Robert Wagner and Peter Weyrich, Department for Internal Medicine IV, Angiology, Endocrinology, Nephrology and Clinical Chemistry, University Hospital of Tuebingen, Tuebingen, Germany. Email: nora.celebi@med.uni-tuebingen.de

Daniel Heine and Yelena Fenik, Medical School, University of Tuebingen, Tuebingen, Germany

Friederike Holderried, Medical school, Office of the Dean of Student Affairs, University of Tuebingen, Tuebingen, Germany

Anne Werner and Stephan Zipfel, Department for Internal Medicine VI, Psychosomatic Medicine, University Hospital of Tuebingen, Tuebingen, Germany

Reimer Riessen, Medical Intensive Care Unit, University Hospital of Tuebingen, Tuebingen, Germany

E-learning = inequity in learning?

Dear Sir

We read with great interest the recent paper in this journal documenting the implementation of a medical immunology e-learning package for medical students at the Norwegian University of Science and Technology (Boye et al. 2012).

While there is a lot of hype about e-learning adoption in medical education, Boye et al. implicitly underscore a very important message; adopting 'a one size fits all' e-learning package will eventually fail to serve the needs of different types of students. It is not only about the package (single multimedia package versus Web 2.0, or traditional web-based versus mobile friendly application) but various factors are also involved. An e-learning platform ideally should be able to facilitate students with different learning styles and cognitive levels. Game players are familiar with different challenges being presented to them based on their performance. Similarly, students need e-learning packages that understand their cognitive level and can provide the most appropriate recommendation, resources and mode of interaction for each students' conditions and needs.

Futuristic concepts of adaptive e-learning, characterized by personalized learning and self-organized, have been articulated (Sandars & Haythornthwaite 2007). In addition, with the advent of Web 2.0 technologies, e-learning platforms will evolve to be more participative, more social and mobile. It is up to medical educators to adopt the best-suited adaptive platform for their environment to bring equity in learning.

Anis Fuad and Chien-Yeh Hsu, Graduate Institute of Biomedical Informatics, Taipei Medical University, Taiwan. Email: anisfuad@ugm.ac.id

Aprisa Chrysantina, Information Technology Master Program, Faculty of Engineering, Universitas Gadjah Mada, Yogyakarta, Indonesia

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Let's be clear on the proper place of photographs in teaching dermatology

Dear Sir

I read with a degree of interest the letter by Amri et al. (2012) on the proper place of digital photographs in teaching dermatology. They undertook a study to compare student learning from either a session of 'traditional clinical teaching' on five patients, or what one must infer was a similarly facilitated teaching session based on images of these patients. They found no statistical difference in outcomes of diagnostic ability. However, even allowing that the report is in succinct correspondence form, there appear to be important limitations of methodology and reporting such as unclear hypothesis, small sample size with no power calculation, no comments on efforts to reduce confounding, such as by preventing students from each group from meeting during the study and no assessment of whether some students did any further study of the subject prior to their evaluation. Whatever doubt this may cast on the reliability of their results, I was rather astounded to read that, 'The majority of students agreed or strongly agreed that digital photograph teaching is better than the traditional clinical teaching, as well it encouraged them [sic] to learn more about the discussed conditions'. This runs starkly counter to my experience of teaching dermatology to hundreds of medical students. The highlight for most is the chance to interact with real patients with real disease. This is particularly important in dermatology, as the psychosocial impact of skin disease is often a major source of morbidity and this cannot be gauged from photographs. Some skin disease presents with very subtle findings that are difficult to capture by photography and palpation is often required as part of the skin examination. Without question, clinical photographs have an important role in dermatology education – classical presentations can be shown, rarer or acute diseases can be illustrated, assessment of large numbers of students can be enhanced – but their proper place is certainly as an adjunct to clinical exposure to actual patients. Amri et al. may need to reflect on how effectively they deliver their traditional clinical teaching.

Stuart N Cohen, Department of Dermatology, Queen's Medical Centre, Nottingham University Hospitals NHS Trust, Derby Road, Nottingham NG7 2UH, UK. Email: cohensn@yahoo.com

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A corrective approach to doctors' illegible handwriting: A pilot course in Italy

Dear Sir

Doctors' handwriting has always received some attention by media and public because it is usually believed to be qualitatively poor. In fact, sloppy doctors' handwriting can lead to perilous misinterpretations of medical notes, medical expressions, or even drug dosages. In turn, this can easily lead to malpractice or even to client's death (Sokol & Hettige 2006). An article appeared in *Time* magazine (Caplan 2007) stated that poor doctors' handwriting kills about 7000 people each year. This appalling number reminds medical teachers the importance of a legible handwriting in professionalism of medical students and doctors. Besides, although efforts have been made to introduce doctors' notes directly into electronic tablets, a pilot course for improving doctors' handwriting was started in Italy. An *ad-hoc* scale of legibility was used for formative and summative assessment. It was based on a single evaluation of 40 unrelated words that each doctor copied from a pool of 100 randomly extracted. Five independent assessors scored the 40 words by using a five-point Likert scale, scoring from 5 (100% legibility) to 1 (0% legibility). Finally, the scores from the assessors were averaged to obtain the final result for each doctor. The remedy course included practical skills in calligraphy and fast handwriting. Participants were then introduced to theories of personality and handwriting explained by certified graphologists. Furthermore, theories and labs of calligraphy initiated participants to aspects of style and corrective actions in handwriting. Other sections introduced learners to medico-legal aspects of errors in interpretations from poor doctor's handwriting. At the end of the course, the majority of learners felt that it gained insight into risks for malpractice and the potential threat to a client's life from illegible prescriptions and unreadable medical notes in hospital and private practice. The corrective course also generated an improvement of handwriting legibility on the test with a mean entrance score of 1.82 (SD = ± 0.80) and with a mean exit score of 4.12 (SD = ± 0.71) in 150 participants.

Carlo Lazzari, Centre for Health Education, Via Raiale 112, Pescara, 65128 Italy. Email: lazzari.carlo@tiscali.it

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