RIME Session: The Emerging Learning Environment

Art as Sanctuary: A Four-Year Mixed-Methods Evaluation of a Visual Art Course Addressing Uncertainty through Reflection

Purpose

Engagement with visual art is a promising modality for addressing issues of uncertainty via reflective practice, one that is being increasingly used in health science education. We created an elective museum-based course for first year medical students led by an art educator experienced in medical education. The course, titled, Observation and Uncertainty in Art and Medicine (OUAM), sought to help students explore experiences of uncertainty and to develop reflective capacity through engagement with visual art.

Method

We describe the objectives and teaching methods and present a four-year mixed methods evaluation that explored curricular objectives with 47 students. Students completed a pre- and post-course Groningen Reflection Ability Scale (GRAS) of reflective ability, the Tolerance for Ambiguity (TFA) scale for ambiguity, and Best Intentions Questionnaire (BIQ) for personal bias awareness. Focus group interviews and narrative post-course evaluations were conducted, coded and thematically analyzed.

Results

Statistically significant improvement was found in the GRAS reflective ability scale. Qualitative themes included student enhancement of observational skills; awareness of the subjectivity and uncertainty of perception; exploration of multiple points of view; and recognition of the course as a place for restoration and connection to classmates.

Conclusions

Incorporating visual art into medical education is an effective pedagogical method for addressing competencies central to training, including observation, reflection, and self-care.
Medical Student Use of Electronic and Paper Health Records during Inpatient Clinical Clerkships 2012-2016: Results of a National Longitudinal Survey

Purpose

Electronic health records are increasingly used in medical practice, and medical education guidelines have made competence in their use an important clinical skill that medical students should learn. The purpose of this study is to examine medical student use of electronic and paper health records during their clinical education over a five-year time period using a national sample.

Method

An online survey about health record use within six inpatient clerkships was administered to medical students after they completed USMLE Step 2 CK. Descriptive statistics were computed for a sample of 21,695 students from US medical schools by graduation year (2012-2016) to determine the percentage of clerkships in which students engaged in various health record activities. ANOVA techniques were used to test for differences in average percentages.

Results

The percentage of clerkships in which students used electronic health records increased from 78% to 93%, while the percentage of clerkships in which students entered into records remained constant (about 75%). Students entered admission or progress notes in the majority of their clerkships, with significant increases over time. Students entered orders in fewer of their clerkships, with little change over time. The percentage of clerkships in which students engaged with paper records was lower than for electronic records, and declined for all activities.

Conclusions

Regardless of health record format, US medical students may receive inadequate training in documentation of clinical activities in health records during their clinical education, a core clinical skill that ought to be learned during undergraduate medical education.
Does Incorporating a Measure of Clinical Workload Improve Workplace-Based Assessment Scores? Insights for Measurement Precision and Longitudinal Score Growth

Purpose

Some work days are harder than others; and on other days, we perform our tasks better. In this study, we investigate the impact of incorporating observer-reported workload into workplace-based assessments (WBA) scores on: (1) psychometric characteristics of WBA scores and (2) measuring changes in performance over time using workload-unadjusted versus workload-adjusted scores.

Methods

Structured clinical observations and multisource feedback instruments were used to collect WBA data from first-year pediatrics residents at ten residency programs between July 2016 and June 2017. Observers completed items in eight subcompetencies associated with Pediatrics Milestones. Faculty and resident observers assessed workload using a sliding scale ranging from low to high; all item scores were rescaled to a 1-5 scale to facilitate analysis and interpretation. Workload-adjusted WBA scores were calculated at the item level using three different approaches, and aggregated for analysis at the competency level. Mixed-effects regression models were used to estimate variance components. Longitudinal growth curve analyses examined patterns of developmental score change over time.

Results

On average, participating residents (n = 252) were assessed 5.32 times (SD = 3.79) by different raters during the data collection period. Adjusting for workload yielded better discrimination of learner performance, and higher reliability, reducing measurement error by 28%. Longitudinal analysis showed an increase in scores over time, with significant interaction between workload and time; workload also increased significantly over time.

Conclusions

Incorporating a measure of observer-reported workload could improve the measurement properties and the ability to interpret workplace-based assessment scores.