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43 – Competency in Medical Record-Keeping: Development of a Scale and Assessing CME (CPD) Impact

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Poor medical record keeping is a commonly encountered deficiency when evaluating physician quality. Medical records that do not adequately or accurately capture what transpired between the provider and patient at the time of an interaction lead to poor communication, medical errors and lawsuits. The University of California, San Diego, Physician Assessment and Clinical Education (PACE) Program has been offering assessment and remediation of physicians in all specialties since 1996. Early in the course of our assessment program, it became clear that deficient medical records were a common theme for many referred participants. Further needs assessment work revealed that only a small minority of physicians ever received formal training in medical record keeping. A surprising finding since a medical record entry must be made for every patient interaction. PACE therefore developed the Medical Records Keeping Course (MRKC) and initially offered it in 1999. Similarly, PACE offers continuing education courses in prescribing, physician-patient communications, professional boundaries, anger management and customized courses.

A number of the ACGME/ABMS Core Competencies (Patient Care, Medical Knowledge, Practice-Based Learning and Improvement, Interpersonal and Communication Skills, Professionalism and Systems Based Practice) particularly interpersonal and communication skills, and professionalism address medical record keeping. It is an integral and necessary part of the practice of medicine. The medical record serves as a source of communication, is used to help determine the quality of patient care, is used to confirm proper reimbursement and is the key source of evidence in medical risk management matters.

The PACE MRKC content covers: an introduction to medical records and a brief history of the modern day record; the legal requirements and aspects of the medical record; coding, billing and compliance regulations; computer hardware and software information related to the record; information retrieval, information security, privacy and HIPAA ; and, the electronic health record. Acquisition of knowledge, skills or attitudes is the goal of any educational endeavour. To measure the success of knowledge acquisition, the PACE MRKC course has pre-tests and post-tests. Knowledge (competence) must be achieved prior to incorporating items into practice (performance). Knowledge, the precursor to practice, is easier to assess and became our initial objective.

The participants of the PACE MRKC were generally mandated to attend the course by a state regulatory board, hospital or medical group based on a disciplinary action. In the sample, one hundred seventy-two participants took the pre- and post-test. A comparison group/convenience sample of thirty-two non-disciplined UCSD Family Medicine residents and faculty were recruited. A thirty item multiple-choice test was devised covering the content areas of "legal/ethical, electronic health record and

coding." Principle components factor analysis demonstrated a strong one factor solution. An independent three factor solution was tested but there was weak statistical support for the three factor structure. Cronbach's alpha was 0.72, with 30 items indicating internal consistency.

The MRKC participants scored 21.2 on the pre-test and 24.7 on the post-test. The UCSD faculty scored 24.3 on the pre-test and 25.3 on the post-test and the UCSD residents scored 23.1 on the pre-test and 24.0 on the post-test (figure 1). There was significance difference between comparison groups with the MRKC physicians scoring significantly lower than the UCSD groups on the pre-test ($p<0.01$) validating that the MRKC participants should have been participants of the course. A 2x3 ANOVA (MRKC/UCSD (fac. and res.) & time) indicated significance with time and group interaction ($p<.01$)(figure 2).

Further analysis of scores looked at other MRKC participant factors including whether the participant was a foreign medical graduate, American Board of Medical Specialty certified and age. The only factor revealing a significant change in score was whether the participant was a foreign medical graduate or not (figure 3).

In conclusion, the pre-test and post-test for the PACE MRKC are reliable examinations. The physicians that were referred for the course did score significantly lower than those physicians not referred to the course indicating that their pre-course knowledge base was deficient compared to the UCSD faculty and residents. The PACE MRKC participants did significantly increase their knowledge through attending the course. Being a foreign medical graduate was a risk factor for a lower score but whether it was a language issue or an education issue could not be determined and remains an item for further study.

Figure 1
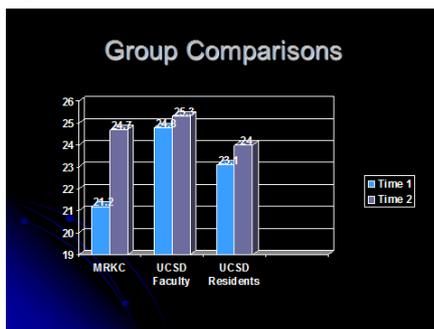
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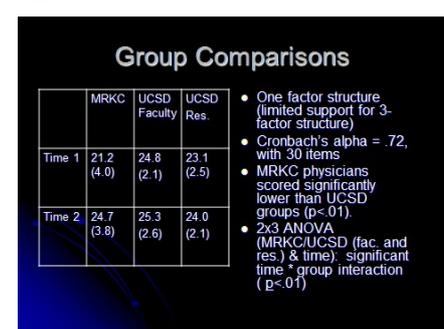
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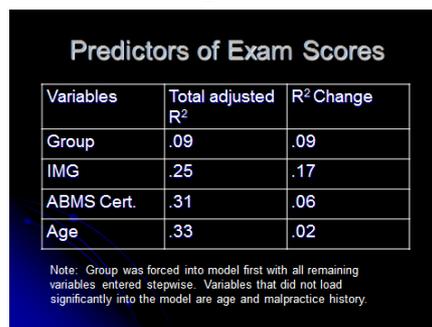
Take Home Messages:

- Adequate and accurate medical record keeping is important for delivery of safe and optimal medical care; and it's the law.
- Despite the extensive education that physicians receive, most have not had formal training in medical record keeping.
- The University of California, San Diego, Physician Assessment and Clinical Education (PACE) Program developed an accredited CME program, Medical Record Keeping Course (MRKC), in 1999 and educates approximately 200 physicians and other health care providers per year.
- Each participant completes a pre-test and post-test as a required component of the course. PACE has

demonstrated statistically significant knowledge acquisition by course participants.

- Knowledge in MRKC participants was statistically significantly less on the pre-test when compared to a university faculty and resident cohort confirming that the participants, almost exclusively referred to the course for disciplinary reasons, had a pre-course deficient knowledge base in medical record keeping.

Original Abstract

http://www.woncaeurope.org/content/4305-competency-medical-record-keeping-development-scale-and-assessing-cme-impact

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