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Original Article

Finding time and resources for education in a busy clinical practice*

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Charles H. Mayo stated "the great contribution we can make is to prepare the oncoming generations to think they can and will think for themselves". The Hippocratic Oath also indicates that physicians have an obligation to transmit their knowledge to the next generation. Hence, it is important to find time and resources for education even in busy clinical practices.

Finding time and resources for education in a busy clinical practice, however, has always been a challenge. Unfortunately increasing bureaucracy imposed upon training programmes, particularly in the last 10–15 years, by extrinsic governing and regulatory agencies has made this even more challenging. These extrinsic governing bodies and regulatory agencies include, but are not limited to, the Joint Commission on Accreditation of Health Care Organizations, the Accreditation Council for Graduate Medical Education (ACGME), the Center for Medicare and Medicaid Services, as well as the members of the American Board of Medical Specialties.

Resident work-hour restrictions

The implementation of work-hour restrictions for residents and fellows has had a major effect on medical education. The work-hour restrictions were sparked by the Libby Zion case, in which a patient died allegedly because of errors made by an overworked, fatigued house officer. The assumption was that it was unsafe to require overly tired junior physicians to make decisions independently for acutely ill patients. In response to this, there have been a number of iterations and changes in resident work-hour restriction regulations; however, 30 years after the tragic death of Libby Zion, there is mounting evidence to suggest that attempts to make residents "less tired" have not helped patients.[1] There have been a number of excellent studies that strongly suggest that the implementation of work-hour restrictions has not changed the incidence of medical errors but has negatively impacted education of young doctors. In 2013, Sen et al stated that "although the reforms reduce the total number of hours that interns are on duty, they did not affect intern's duration of sleep or mental health and increased the frequency of self-reported medical errors".[2] In addition, Sen stated that "There is important early evidence that the newest ACGME restrictions alone have not met with immediate success in either improving the health of residents or in leading to a reduction of self-report errors". Sanjay found that "compared with the 2003 compliance model, the two 2011 duty hour regulation-compliant models were associated with increased sleep duration during the on-call period and with the deterioration in educational opportunities, continuity of patient care, and perceived quality of care".[5] Goitein, in 2013, wrote that "findings following the implementation of the 2003 work hour limitations, which

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established the 80 hour work week, were inconclusive in terms of patient safety and educational outcomes. But residents and faculty consistently report concerns about the effects on quality of care and education".[3]

Restricted resident work hours result in increased patient care handoffs to different physician teams; one certainly could predict that increased handoffs would result in increased medical errors and this clearly has been shown to be the case. Peterson wrote "potentially preventable adverse effects are strongly associated with coverage by a physician from another team, which may reflect management by house staff unfamiliar with the patient. The results emphasis the need for careful attention to outcome of work hour reforms for house staff … the occurrence of potentially preventative adverse events is associated with cross coverage by physicians who are less familiar with the patients than their usual interns".[4]

Unfortunately the work-hour restrictions that have been imposed upon training programmes have resulted in physicians not taking ownership of patients and have turned the practice of medicine into shift work. This is unfortunate, to say the least.

The effect of work-hour restrictions also has had a number of unexpected consequences. When duty hours of house staff are decreased, the workload of the staff physicians is increased. The fact that the resident has fewer duty hours and is unavailable to be taught and that the staff physician has increased duties together decrease teaching time opportunities. We know from studies of musicians that the more practise one has, the better one gets at mastering their instrument. It is axiomatic in medicine that the more cases one sees and the more operations one performs, the more skilled one will become.

Documentation of care requirements

The imposition of rules from a number of agencies that require lengthy clinical notes to satisfy reimbursement requirements has resulted in decreased teaching time. These lengthy notes, both in the hospital and clinic settings, consume an extensive amount of resident and staff physician time. There are little, if any, data that this improves medical care. In fact it has led to a "cut and paste" mentality, resulting in extraneous and not particularly useful information bundled into clinical notes, making it very difficult to ascertain the important aspects that the note is intended to convey; moreover, because of a number of rules mandated by external agencies, including third-party reimbursement agencies, the requirement for staff physicians to counter-sign all orders decreases the time they have to teach.

Training programme documentation

The amount of paperwork now required of training programme directors by the ACGME is mind boggling. It is resulting in excellent programme directors leaving these positions over frustration with the ACGME-imposed bureaucracy. It remains unclear whether or not this massive increase in required paperwork improves the educational process or the products of the educational process. Certainly there are little data to show that it does – for example, there are 21 "milestones" that programme directors and faculty are required to measure for each trainee in a paediatric subspecialty programme:

- Systematically analyse practice using quality improvement methods, and implement changes with the goal of practice improvement.
- Provide transfer of care that ensures seamless transitions.
- Make informed diagnostic and therapeutic decisions that result in optimal clinical judgement.
- Develop and carry out management plans.
- Provide appropriate role modelling.
- Locate, appraise, and assimilate evidence from scientific studies related to their patients' health problems.
- Work effectively in various health-care delivery settings and systems relevant to their clinical specialty.
- Coordinate patient care within the health-care system relevant to their clinical specialty.
- Incorporate considerations of cost awareness and risk-benefit analysis in patients and/or population-based care as appropriate.
- Work in inter-professional teams to enhance patient safety and improve patient care quality.
- Identify strengths, deficiencies, and limits in one's knowledge and expertise.
- Systematically analyse practice using quality improvement methods, and implement changes with the goal of practice improvement.
- Use information technology to optimise learning and care delivery.
- Participate in the education of patients, families, students, residents, fellows, and other health professionals.
- Professional conduct: high standards of ethical behaviour, which includes maintaining appropriate professional boundaries.
- Trustworthiness that makes colleagues feel secure when one is responsible for the care of patients.
- Provide leadership skills that enhance team functioning, the learning environment, and/or the health-care delivery system/environment with the ultimate intent of improving care of patients.

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- The capacity to accept that ambiguity is part of clinical medicine and to recognise the need for and to utilise appropriate resources in dealing with uncertainty.
- Communicate effectively with physicians, other health professionals, and health-related agencies.
- Work effectively as a member or leader of a health-care team or other professional groups.
- Act in a consultative role to other physicians and health professionals.

For these 21 "milestones", there are five levels of attainment that must be judged by the faculty. Thus, for every trainee, each faculty member must assess 105 (21×5) issues. There is no question that every one of these "milestones" is important and laudable. The question, however, is as follows: Are these "milestones" really measurable? Furthermore, is there any evidence that this mountain of paperwork and time commitment of faculty improve the quality of the training programme or the quality of the trainees?

Maintenance of certification

The implementation of "maintenance of certification" instituted by the members of the American Board of Medical Specialties has had a number of negative effects. It is important to note that there is little, if any, evidence that the maintenance of certification programmes have improved medical care; however, they clearly have increased the expense to the medical system. The time that physicians have to spend in maintenance of certification curricula certainly reduces the time available to teach trainees.

Some solutions

It is clear that the major impediment to finding time to teach is regulation imposed by extrinsic governing bodies that consume immense amounts of faculty time and remove the trainee from the teaching environment. I will challenge anyone to prove that doctors become better by having *less* experience taking care of patients or that the paperwork imposed by the ACGME upon training programmes improves outcomes. The only solution to these poorly conceived impositions is for major teaching institutions to push back on these poorly conceived impositions. Most of these regulations are not evidence based. In the words of the late Nancy Reagan, a coalition of major medical institutions should "just say no".

In view of the reduced time and opportunities for teaching, one must strive to efficiently use that time. There are several ways to become more efficient. All conferences should end on time. If a conference lasts 5 minutes longer than scheduled and 50 persons are attending that conference, then 4 hours and 10 minutes of the attendees' time has been wasted! All speakers should be reminded that "a good conference ends on time and an excellent conference ends early".

In addition, one must strive to be efficient during hospital rounds. Everyone needs to focus on the problem and patient under discussion and to refrain from discussing extraneous issues.

When performing outpatient teaching, should the trainee see the patient with the Staff or should the trainee see the patient first and then present the case to the Staff physician? A combination of these two techniques is best. In the former situation, the trainee has the opportunity to observe how a seasoned experienced clinician approaches patients. The later situation also is necessary to develop autonomy and stimulate independent thinking but may be more time consuming for all involved; the patient, the trainee, and the Staff physician.

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