

circumstances. Currently, almost all residency-review committees will not consider requests for exceptions to the work limit of 80 hours per week. Programs can permit but not require residents to remain on duty to ensure patient safety. Residents themselves would therefore have to take responsibility for extending duty hours. Since the rules defining what is acceptable in the interests of patient safety are vague, in practice neither the residency programs nor the residents will wish to risk the consequences of being in violation of the Accreditation Council for Graduate Medical Education (ACGME) rules and will adhere rigidly to the prescribed recommendations.

Johns also states that the committee recommendations allow programs to maintain the current 80-hour weekly duty limit. However, the required 5-hour nap for each call day will count toward the 80 hours. Thus, on a typical inpatient overnight call schedule with 2 or 3 call days per week, 10 to 15 of the 80 hours will be allocated to naps and will not be available for patient care or to achieve learning objectives; this represents a substantial reduction in work hours.

Our editorial calls for careful studies of the impact of the IOM recommendations on patient safety, preventable adverse events, and other im-

portant patient care and educational end points. We continue to believe that such studies are essential before the recommendations are implemented. The IOM report itself acknowledges “how difficult it is to substantiate the conventional wisdom that reduced hours would clearly result in improved care.” Six years after implementing the ACGME regulations of 2003, there is still no consensus on whether these changes have improved patient safety. The study by Nuckols et al. highlights our inability to predict accurately the cost of the latest IOM recommendations and their impact on preventable adverse events. In light of these considerations, we believe that it would be a serious mistake to not resolve the most important of these issues by careful scientific study before rushing to implement the IOM recommendations.

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Residents' Duty Hours and Professionalism

TO THE EDITOR: The Accreditation Council for Graduate Medical Education (ACGME) is currently reevaluating its 2003 rules¹ regarding duty hours, in light of the recent recommendations² from the Institute of Medicine (IOM) regarding additional limitations. Although the financial costs incurred in the initial implementation of the rules were substantial and the projected financial costs of further limitations are daunting, another cost, left unaddressed by the IOM task force, is even more troubling to many of us who are involved in graduate medical education. We have transformed the trainees in our core programs from dedicated professionals into shift workers.

When the duty-hour rules of 2003 went into effect, we scheduled our residents' duties to fully use the available hours. We took away their control, preventing them from making the decisions that characterize a professional. We now force them to leave a patient with whose treatment they

are intimately involved or to cease the observation of an instructive surgical procedure midstream. It did not take long for this system to produce residents who would either walk away when their time had expired or else lie in order to violate the rules. Although we added “professionalism” as a training goal, we began giving our trainees the choice between abandoning a patient and lying.

We must return professional decision making to the residents. Of the 80 hours per week they are allowed to work, no more than 75 hours should be formally scheduled. These assigned hours need to be monitored, and violations should be subject to ACGME sanctions. The remaining 5 hours should be left purely to the discretion of the individual residents, to use however they see fit; there should be no expectation that they will provide clinical services to the program during these hours. These hours should not be subject to any specific restrictions but should be limited

only by the resident's assessment of his or her level of fatigue. If a resident feels it is important to give up an hour on a day off to meet with a patient's family or to stay an extra hour observing an unusual case, it should be allowable. We are required to teach our residents about recognizing fatigue, and this approach would allow us to verify that learning in a supervised setting.

If we fail to make this change to our training system, we will end up with a large number of medical workers, not medical professionals.

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This letter (10.1056/NEJMc0905152) was updated on May 18, 2011, at NEJM.org.

1. Report of the ACGME Work Group on Resident Duty Hours. Chicago: Accreditation Council for Graduate Medical Education, June 11, 2002.
2. Ulmer C, Wolman DM, Johns MME, eds. Resident duty hours: enhancing sleep, supervision, and safety. Washington, DC: National Academies Press, 2008.

More on Bevacizumab in Hereditary Hemorrhagic Telangiectasia

TO THE EDITOR: Bose et al. (May 14 issue)¹ report on a patient with hereditary hemorrhagic telangiectasia (HHT) who was treated with bevacizumab for epistaxis. Our patient was a 55-year-old man with HHT (endoglin mutation P.LYS402.FS) with intractable pain and frequent episodes of pancreatitis related to pancreatic arteriovenous malformations. Surgery and embolization were not feasible. An indium-111-labeled bevacizumab single-photon-emission computed tomographic (CT) scan² showed elevated tracer uptake in the arteriovenous malformations. Bevacizumab at a dose of 5.0 mg per kilogram of body weight every 2 weeks was started 1 year ago. This treatment immediately stopped the epistaxis, the skin vascular signs became less pronounced, and the frequency and severity of pancreatitis diminished. After 5 months, the dose was increased to 7.5 mg per kilogram every 2 weeks. Thereafter, morphine and tube feeding could be discontinued, and the patient resumed work. No change in the volume of the arteriovenous malformations was observed on CT. The patient still receives bevacizumab.

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Dr. de Vries reports attending an advisory board meeting for Roche in May 2009 for which the University Medical Center Groningen received €2,000 (\$2,838). No other potential conflict of interest relevant to this letter was reported.

1. Bose P, Holter JL, Selby GB. Bevacizumab in hereditary hemorrhagic telangiectasia. *N Engl J Med* 2009;360:2143-4.
2. Nagengast WB, de Vries EG, Hospers GA, et al. In vivo VEGF imaging with radiolabeled bevacizumab in a human ovarian tumor xenograft. *J Nucl Med* 2007;48:1313-9.

TO THE EDITOR: We administered bevacizumab to a 65-year-old woman with HHT and life-threatening, recurrent hemorrhage. She had undergone liver transplantation 10 years earlier for arteriovenous shunting. Over a 1-year period, worsening anemia developed because of recurrent epistaxis and gastrointestinal bleeding, despite maximal standard therapy of iron infusions, estrogens, and tranexamic acid. From February through July 2008, she received 27 transfusions containing a total of 52 packed cells. Six courses of bevacizumab (5 mg per kilogram) were administered without any adverse events. Blood transfusions were not required for 2 months. Only medical therapy was continued. In December 2008, hemorrhage resumed, but with a reduced need for blood transfusion, as compared with her earlier course.

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THE AUTHORS REPLY: The cases described by Oosting et al. and Retornaz et al. give further