

subspecialist colleagues do them. Every question asked by Dr. Norris in his editorial regarding whether family physicians should incorporate procedures into their practice could easily be addressed to our subspecialty colleagues. Many procedures have been incorporated into practice without the benefit of strict cost-effectiveness studies. The question speaks to the role of procedures in medicine as well as family medicine.

I believe a set of criteria should be developed regarding the applicability of procedures, which I would model after Koch's Law—the criteria used in proving an organism is the cause of the disease or lesion. This set of procedural postulates might also be used to determine funding procedural education by limited-resource organizations (American Academy of Family Physicians, American Board of Family Practice, Health Care Financing Administration, etc).

Koch's Law Postulates	Procedural Postulates <sup>3</sup>
(Criteria proving organism is cause of disease or lesion)	(Criteria proving procedure is important for physicians to learn and do)
1. Microorganism in question is regularly found in disease lesions	1. Procedure is in general use or is thought to go into general use in near future
2. Pure cultures can be obtained from it	2. Procedure is tested to be valid
3. Pure cultures, when inoculated into susceptible animals, can reproduce the disease or lesions	3. Residents, when taught procedure through adequate curriculum, can learn indications, complications, and side effects, and can successfully complete the procedure.
4. The organism can be obtained again in pure culture from the inoculated animal	4. Procedure can be used in the primary care setting to alter behavior, enhance lifestyle, deepen patient-physician bonding, improve compliance, and help preventive medicine strategies, thus reducing morbidity and mortality

The first three procedural postulates can be relatively presumed. The fourth is the hard one. Toward that aim, I examined whether exercise treadmill tests are capable of altering behavior and I was surprised to find that a positive exercise treadmill test had a positive effect on short-term quit smoking rates.<sup>4</sup> I suspect that a procedure such as colposcopy modifies unprotected sexual intercourse when human papillomavirus or other organisms or changes are found. Whether diverticular disease found upon flexible sigmoidoscopy can encourage a change in diet or behavior has not been studied. The list goes on and on.

I would agree that family physicians have moved beyond needing to prove they can do certain procedures. We know that we can do them and do them well. Now it is time to prove that these procedures have a valid role in modifying behavior or improving morbidity and mortality.

Curiously, no mention is made of whether medical students are more attracted to a residency that offers

training in procedures, of parity with our subspecialty colleagues in hospital, of potential savings of time and money, of unavailable subspecialists in truly rural settings, or of maximum benefit to the resident.

I look forward to these interesting times we live in.

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## Inpatient Practice and Hospitalists

*To the Editor:* Having taken the time to study, analyze, and publish the recent report by Stadler et al<sup>1</sup> and the accompanying editorial by Rivo<sup>2</sup> on this important and timely topic, the author, editorialist, and editor are to be chided for not making more of such an opportunity. The related topics of hospital practice, obstetric care, and procedures are critical fault lines in the discipline of family practice as a whole and, even more evidently, between family practice educators and practitioners. As such, they richly deserve, though often elude, careful and balanced analysis.

The authors fall short of their potential by failing to deal with important methodologic, clinical, and data issues. The physician's interest in the topic of hospital care is a likely correlate of the decision to respond to the survey. Acknowledge that this initial bias might be important. Recall bias should also be addressed. It seems to me essential to differentiate hospital-based obstetric care from illness care and to be sure that hospital-based ambulatory procedures are not included in the data. I do not recall a similar data set published in which the median was the only data point acknowledged. Finally, the research conclusion takes a peculiar form: "Inpatient medicine continues to figure prominently in the work of family physicians." How was this operationally defined? What is the null hypothesis? What a priori data manipulations, tests of significance, and so on, were embraced by the researchers to prove or disprove their research question?

Dr. Rivo's commentary is thoughtful and more balanced. Nevertheless, both he and the authors of the original report amply reveal their biases; we are old enough to realize that further studies will have little or no impact on the course of the practice under consideration.

Dr. Stadler and colleagues could have offered a more important and thought-provoking contribution to the

discourse on this topic had they connected their data to the real-life issues involved in decisions about inpatient practice. Consider the following: "Our data indicate that, while providing care for approximately 100 patients in the course of a typical week, the modal family physician who provides inpatient care admits 1 acutely ill patient to hospital on the average of once every 15 days. With a length of stay of 2.9 days, this means that on 6 days each month, (s)he must be available to visit the hospital, without predictability of day or time to care for 1 patient" (data in italics are entirely fictional).

Even a superficial analysis of the economics, not to mention the range of clinical problems - three cases of pneumonia a year, one case of myocardial infarction every 2 years, and so on—could be very illuminating and could help frame our continuing discussion.

These are sensitive and complex topics for our discipline. With the vocal and righteous firmly on the side of intervention and comprehensiveness, balanced discourse does not occur. Most unfortunately, we are kept from discussing the really important question: When family physicians (and general internists and pediatri-

cians) no longer care for patients in the hospital, what organizations and communities will replace the collegial and educational functions that hospitals have traditionally provided? Physicians, hospitals, medical schools, and managed care organizations should be intensely pursuing innovative and effective answers to this question. We cannot hide our heads in the sand and cling to romantic dogmatism while such important questions go unaddressed.

Thanks to the authors, editorialist, and the *JABFP* for providing such interesting food for thought. I hope my response is also a positive contribution.

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