Tough Choices: Who Is to Make the Call?

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One cannot pick up a medical journal nowadays or, for that matter, open a newspaper or switch on the television, without being reminded that the national expenditure of funds for health care is an uncontrolled hemorrhage. Every economist, health care planner, public health official and politician worth his or her salt recognizes the problem and has some sort of suggestion as to how we can stanch the flow. Responsibility for decisions regarding who receives what care, previously the unchallenged territory of the attending physician and his patient, is being transferred to nonphysician administrators and, in the case of the state of Oregon, to legislative bodies. Medicine and its practitioners are no longer trusted to make their choices both medically sound and fiscally responsible. In many instances, we have no one to blame but ourselves.

With the advent of third-party payment of medical costs ("You bill it, we pay it"), particularly since the introduction of the Medicare system in the mid-1960s, physicians until recently have had little pressure placed upon them to control costs. Newer and more expensive pharmaceuticals, equipment and treatment options have been developed, each carrying a much-trumpeted incremental advantage over its predecessor and each establishing itself as the "standard-of-care." Only quite rarely do these developments undergo cost-benefit analysis. If penicillin is 95% effective, but the outrageously-expensive Godzillamycin works 99% of the time, why not be more sure and use the latter all the time?

Nuclear medicine is not immune to this sort of logic. The debate over PET versus SPECT imaging has been conducted in the pages of this journal (among others), while the relative merits of ^{99m}Tc-sestamibi versus ^{201}Tl as a myocardial perfusion agent continue to be argued. Unfortunately, the research centers that devote so much time and effort to establish the diagnostic advantages of a new technology or agent are little interested in or affected by the consequent stampede of nuclear medicine physicians, radiologists and cardiologists to use the latest piece of hardware or radiopharmaceutical and reap its unquestioned rewards, whatever the cost.

My intent is not to indict one particular drug or technology, but sestamibi does provide a seductive example familiar to this readership. I could as easily use tissue-plasminogen activator (tPA) for an audience of clinical cardiologists. Much ballyhooed during its trials as the long-awaited replacement for ^{201}Tl, the investigational drug RP30 did show great promise as an imaging agent in areas where thallium is inherently weak. Long-awaited FDA approval and a vigorous media blitz have created a strong demand for the product now christened Cardiolite. The advantage of superior imaging owing to the more energetic ^{99m}Tc photon has been played up, and some of the less desirable features (e.g., hepatobiliary tracer activity obscuring the inferior wall, much higher cost per dose) were de-emphasized. An aggressive team of "detail men," in the guise of educators, has fanned out across the country to proselytize.

Curious and rather novel strategies have been implemented by those who manufacture and distribute sestamibi to optimize profit. The product is sold with a license attached, which limits the number of doses one may draw from each vial, regardless of residual activity left (akin to Heinz requiring you to toss out your ketchup bottle when it still contains usable condiment). The goal, of course, is to force you to crack open that next vial. The local nuclear pharmacy I use for unit dosing has developed a sliding price scale (I am still not entirely clear whether or not this is at the behest of the manufacturer), whereby bulk users of sestamibi enjoy a substantial discount over the occasional user. Thus, not too subtle pressure is brought to bear to use more of the product, and all at the expense of the much less costly (and, with less mark-up, much less profitable) thallium.

The obvious question begs to be asked: just how much "better" (if at all) is ^{99m}Tc-sestamibi as a myocardial perfusion agent than ^{201}Tl? If sestamibi is truly superior to thallium, does this increment in quality offset the significant difference in cost?

The hospital-based radiologist or the tertiary care center nuclear physician usually does not put that question into the decision-making algorithm when deciding whether to continue using thallium or switch in whole or

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part to sestamibi. The incremental cost of the more expensive agent is passed along, eventually being borne by the patient's insurance carrier, the government or, in some cases, the patient himself.

My position as a practicing cardiologist who also directs two busy outpatient nuclear cardiology laboratories is a bit different. Third-party payers and my conscience insist that I make daily decisions on a cost-effective basis without significantly compromising quality. Whether to substitute the less expensive treadmill exercise tolerance test for one with nuclear myocardial perfusion imaging or to bypass the exercise test altogether and proceed directly to diagnostic coronary angiography, are alternatives I must consider with each patient referred for evaluation of ischemic heart disease. For me, the decision to continue with thallium or "step up" to sestamibi is also part of the process, which includes an honest assessment of my comfort level with thallium and whether my predictive ability with the newer agent will improve appreciably, thus justifying the considerable increase in cost. At the time of this writing, I am not convinced and continue to use thallium.

I dread the thought that someday soon a nonphysician, someone whose responsibility to the bottom line cost is not tempered by clinical judgment and experience, will begin to make these decisions in my stead. If we, the subspecialists, specialists and primary care providers with clinical judgment and experience, cannot make fiscally-responsible choices, then someone will soon be making them for us.