

## **Radiology performed by nonradiologists in the United States: who does what?**

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**OBJECTIVE.** When nonradiologists perform radiologic procedures, rather than referring their patients to radiologists, utilization--and therefore costs--are high, and quality appears often to be poor. In light of these public policy concerns, the American College of Radiology developed a detailed descriptive analysis of radiology performed by nonradiologists.

**MATERIALS AND METHODS.** Medicare data from 1989, which make up a uniform record of one third of the nation's health care, were the source of the information. These data are reasonably, although not exactly, representative of patients of all ages. We measured radiologic work, and nonradiologists' share of it, in professional component relative value units, using the Medicare radiology relative value scale.

**RESULTS.** Nonradiologists performed 25% of all radiologic work in the United States; their share was 46% in offices and freestanding centers, 27% for hospital inpatients, and 8% for outpatients. Counting procedures (rather than work measured in relative value units), nonradiologists' share was 64% in offices and freestanding centers and 8% for inpatients. Nonradiologists performed two thirds of all work in sonography, half of interventional radiology/angiography, 15-17% of general radiology and nuclear medicine, and a few percent of CT/MR and radiation oncology. Cardiologists performed 10% of all radiologic work in the United States; internists 5%; and orthopedists, ophthalmologists, and family and general practitioners, 2% each. Almost half of radiologic work performed by nonradiologists consisted of coronary angiography and cardiac sonography, done principally by cardiologists. Radiologists do less than 5% of this work. Office and freestanding center general radiology, performed mostly by orthopedists and primary care physicians, accounted for one fourth of the radiologic work done by nonradiologists.

**CONCLUSION.** The general radiology performed by nonradiologists is of a magnitude that easily could be transferred to radiologists, particularly because many unnecessary imaging studies would most likely be eliminated as a result. Such a transfer would reduce costs and probably improve quality but might sometimes decrease patient convenience. However, because many radiologists do not perform coronary angiography and cardiac sonography, a transfer of these responsibilities to radiologists would be problematic and likely to require extensive additional training of radiologists.