

Funding Slashed for Life-Saving Imaging

by Patricia Salisbury

Beginning in January of this year, Bush Administration cutbacks in reimbursement payments under Medicare for imaging technologies have begun to impact this critical life-saving area of medical diagnosis and treatment, including availability and cost of MRI (magnetic resonance imaging), CT (CAT scan), PET (positron emission tomography), DXA (dual-energy X-ray absorptiometry) bone-density scans, and ultrasound. Specifically, the Deficit Reduction Act of 2006, passed by the then-Republican controlled Congress, reduces reimbursement for these technologies in physicians' offices and imaging centers (as opposed to hospital settings), threatening to turn the clock back on one of the most important breakthrough areas in the entire history of medicine.

A January 2000 editorial in the *New England Journal of Medicine*, cited by many of the professionals in the area, listed medical imaging as one of the 11 most significant advances of the past *thousand years*, ranking on a par with the development of antibiotics and the elucidation of human anatomy and physiology. Although a number of medical and professional organizations mounted a campaign during the last six months of 2006 for a two-year moratorium on these cutbacks, it was not successful, and the cuts went into effect in January.

No Political Debate on Cuts

On Aug. 3, 2006, Sens. Jay Rockefeller (D-W.V.) Gordon Smith (R-Ore.) sent a "Dear Colleague" letter to members of the Senate asking for support for the bill they had introduced to place a moratorium on certain sections of the Defecit Reduction Act (DRA): those which provided that payments for procedures delivered in a physician's office or imaging center be capped at a rate not to exceed the rate paid to a hospital outpatient department. The Senators pointed out that these changes could lead to a 30-50% reduction in current Medicare imaging reimbursement rates. They also noted that the imaging payment changes enacted in the DRA were not publicly debated by Congress, yet they represented more than one-third of the total Medicare "savings" in the bill; and that no consideration was given to how the new payment mechanism might affect long-term beneficiary access to these important diagnostic services.

The Senators stated that because of the arbitrary manner

in which the changes were enacted, their legislation called for a two-year delay in implementation and requested a comprehensive Government Accountability Office (GAO) study on the use of such services by Medicare beneficiaries. While the legislation failed in the 109th Congress, professional and medical associations connected to imaging services are determined to reintroduce and pass it in the 110th.

Even short of a GAO assessment, it is clear that the cutbacks will have a major negative impact in the availability of life-saving technologies.

In a statement submitted to a July 18, 2006 meeting of the House Energy and Commerce Subcommittee, Arl Van Moore, M.D., chair of the board of chancellors of the American College of Radiology, put forward the organization's concerns, particularly about the depth of the reimbursement cuts in key areas. They cited:

- CT angiography to examine heart arteries—reduced by 50%;
- PET/CT exams to pinpoint tumor location—reduced by 50%;
- MRI of the brain which is used primarily to diagnose brain tumors—reduced by 50%;
- MR angiography of the head which is used to detect the location of aneurysms, reduced by 42%.

Dr. Van Moore also noted the absence of any Congressional oversight on these cutbacks, stating that it would be expected that a provision which results in a \$2.8 billion reduction in physicians' fees would be debated in committee, on the House or Senate floor, or be the subject of a study by an outside Federal agency as to the effects of such a policy.

Addressing the question of effects of the cutbacks at the same hearings, Landis K. Griffith, director of nuclear medicine at the Baylor University Medical Center in Dallas, spoke particularly to the use of the very advanced PET exam in the management of cancer patients, reporting that it is the estimate of the PET community that the reimbursement cuts contained in the DRA could result in half of the non-hospital based PET and PET/CT providers closing their doors because they would be operating at a substantial loss. The result would be to push these cancer-care services back into the large hospital setting, raising the issue of accessibility to lower-income and underserved patients.

Griffith urged that "the advancement of imaging science, and the ability of cancer patients in all communities across America to access these imaging technologies, must keep pace with the advances in cancer therapy." He pointed out that, now that the medical community has an appropriate tool in PET technology to monitor tumor activity, there has been more rapid development of improved therapies, such as highly targetted radiation therapies and novel molecular approaches to cancer therapy; for example, gene and immunologic therapies. Optimal cancer care is absolutely dependent on optimal imaging care, Dr. Griffith concluded.

Dramatic Scientific Advances

These points were elaborated by Donald W. Rucker, M.D., speaking on behalf of the National Electrical Manufacturers Association, the largest association representing medical imaging manufacturers in the world. Countering the argument that doctors use the technologies too frequently in order to make money, Dr. Rucker stated that the primary driver of imaging utilization are the dramatic scientific and technical advances that allow physicians to see soft tissue and organs inside the human body. The power of imaging to offer more precise and less-invasive care has sparked what can only be described as a fundamental transformation in medicine, he said. In fact, he argued, imaging has become a standard of modern care for virtually all major medical conditions and diseases, including cancer, stroke, heart disease, trauma, and abdominal and neurological conditions.

Ironically, Dr. Rucker pointed out, the justification for the use of these technologies is judged almost entirely on the size of the year-to-year increase, not on whether the reasons behind it are sound or unsound. Increase in the number of imaging procedures per patient is one of the primary metrics used by some, including the Medicare Payment Advisory Commission in a 2005 report, to argue that utilization is excessive and profit driven. Yet, said Dr. Rucker, it is this very metric that captures the transformation of medicine brought about by imaging—physicians use it more broadly, in more patients, for more conditions, because it improves care. Furthermore, Dr. Rucker points out that studies have shown that an increase in the overall utilization of imaging and the number of imaging procedures per patient represents cost savings, since some medical care is found to be unnecessary or ineffective; or less invasive, more effective techniques can be used.

Dr. Rucker concluded: the DRA cuts are excessive in many cases, setting the reimbursement below the office-based cost of providing the service and unjustified by any reduction in overall cost. Given their size, these reductions will set off a chain reaction which will force many physicians to greatly reduce the availability of imaging services. In turn, patients will find it harder to get care, will have to travel farther, and will face long delays as they seek care in hospital outpatient departments.

Crisis in Mammogram Delivery

Even prior to the latest Bush Administration moves on imaging, reports began to circulate showing that the availability of one of the most basic applications of radiological techniques, and one not directly impacted by the January 2007 cutbacks, mammography, was in trouble. In a study released in July 2006 by the GAO, and conducted at the request of the then chairman and ranking member of the Senate Subcommittee on Labor, Health, and Human Services of the Appropriations Committee, Arlen Specter (R-Pa.) and Tom Harkin (D-Ia.), the decline in mammography infrastructure from Oct.



CDC

Mammograms, like the one depicted here, are the first line of defense against breast cancer. But, nationwide, the number of facilities offering this life-saving service have dramatically declined.

1, 2001 to Oct. 1, 2004 was exposed. In that period the number of mammography facilities nationwide decreased absolutely from 9,306 to 8,768 or 6%, including a net decrease of 87 mobile facilities which may serve multiple locations. Forty states lost facilities during this period, including ten states that each lost more than 20 facilities: California, Florida, Georgia, Illinois, New Jersey, New York, Ohio, Pennsylvania, Texas, and Virginia.

One telling figure cited by the study: As of October 2004, 865 counties—one-fourth of the counties in the country, containing 3.4% of the U.S population—had no machines (**Figure 1**). In the same period, the number of counties which had mammography machines remained relatively constant, at about 72%, but the number of machines decreased in certain counties. Of 413 counties that had a net loss in at least one mammography machine during that period, 117 lost more than 25% of their machines.

More recent data show this trend continuing with a more than 11% decrease in the number of facilities from 2000 to

FIGURE 1

Number of Mammography Machines by County, Oct. 1, 2004



Source: GAO analysis of FDA's Mammography Program Reporting and Information System database on the number and locations of mammography machines.

2006. The GAO survey found that financial considerations were most often cited as the reason for facility closures, while experts interviewed by the GAO said that financial considerations and difficulties recruiting and retraining staff have contributed to closures.

Although the DRA cutbacks do not directly impact mammography reimbursements, experts indicated that the more highly reimbursed imaging technologies are often used by centers to subsidize mammography services; so that the reduction of payment in other imaging areas will also impact the already collapsing mammography infrastructure.

The GAO naturally mutes the effects of this decline, claiming that as of 2004, nationwide capacity was adequate based on a purely linear and statistical calculation that if all then-existing mammography units were operating eight hours a day, they could satisfy national demand. However, the GAO researchers were forced to consult experts with frontline experience in the field, and to report that many of these experts were concerned both about the current impact on medically

underserved women, such as those who have low incomes and lack health insurance, and a more general impact in the future, based largely on the growing crisis in the supply of radiation professionals.

For example, a West Virginia official working with the Centers for Disease Control's early detection program for low-income women estimated that after the closure of a facility in one county, program participants' wait time for diagnostic mammography averaged eight weeks and could be as long as two months. Diagnostic mammography is done as a follow-up to an initial screening which results in suspect finding, i.e., that a woman may have breast cancer, and the recommended wait time is two days. A Virginia official estimated that after one county lost its only mammography facility, the loss resulted in some women needing to travel 60 miles to obtain services in comparison with 20-25 miles before the facility closed.

The study noted that these lengthy travel distances might particularly pose a barrier for underserved women. State offi-

cials reported that as of Oct 1, 2004, 12 of Alabama's 67 counties had no mammography machines. An Alabama official identified 10 counties that to her knowledge had never had a mammography facility and were not being served by mobile mammography facilities; each of the counties was designated as a medically underserved area by Federal guidelines. This official estimated that women living in the 10 counties had to travel distances ranging from 30 to 60 miles to obtain mammography services.

Unacceptable Wait Times

In Missouri, 50 of the the state's 115 counties had no machines as of Oct 1, 2004. An official reported that two mobile mammography facilities provided services once or twice a year to the northeast and southeast corners of the state, which have neighboring counties without mammography facilities. However, a woman requiring repeat films because of a possible problem, would have to travel about 250 miles to the provider's central location—about a five-hour trip in each direction. Other officials reported unacceptable wait times. For example, New York officials working with the CDC's early detection program estimated that after the closure of two facilities involving the loss of two machines in Brooklyn, the screening wait time for participants who had used these facilities was about two months and at the busiest time of year, the wait time was

three or four months.

A West Virginia official estimated that after a facility closure in Jackson County, participants' wait time for diagnostic mammography was eight weeks and could be as much as two months. A North Dakota official reported that 60% of North Dakota's counties had no machines as of Oct 1, 2004 and that the limited number of providers in the state served large geographic locations, with one provider's mobile facility serving almost the entire northwest quarter of the state, and was available to some communities only once every four months, and to others, only once a year.

Thus, contrary to what might be a popular misconception, routine mammography is not readily available to every woman throughout the United States—and the picture is worsening. Following an increase in mammography rates in women aged 40 and over in the 1990s, a recent study shows that rates are now declining. As reported by the National Center for Chronic Disease Prevention and Health Promotion of the U.S. Centers for Disease Control and Prevention, there has been an 1.8% decline; this translates into over 1.1 million fewer women falling within the mammography guidelines during 2000 to 2005. While some experts are scratching their heads and suggesting that women may be skipping mammograms because they are growing complacent, the figures on the infrastructure collapse presented above point to a different explanation.

Nuclear Medicine: Why The U.S. Lags Behind

Why does the nation that pioneered so many nuclear technologies now lag behind Europe and elsewhere in the pursuit of lifesaving nuclear medicine? The reason lies in the ignorance and fear of radiation promoted by the anti-nuclear forces, the short-sightedness of Federal budget-cutters, and the unwillingness of medical practitioners to give up traditional ways of treatment. The consequence is measured in lives cut short, because the best available tests and treatments were not used to heal the patient.

In tandem with advances in imaging technologies, which allow us to "see" in the very small, new nuclear medicine techniques, using short-lived radioisotopes, enable doctors to finely target the treatment of cancerous tumors and eradicate malignant cells without harming surrounding tissue. This kind of fine-tuning—for example, attaching a radioisotope to an antibody that makes its way to the tumor site—is more effective and has fewer side-effects than the conventional brute-force chemo and radia-

tion combination treatments for cancer, which debilitate the patient and often damage healthy organs. The promise is that in the future, as the isotope economy develops, medical treatment will move out of the present "dark age."

There are upwards of 113 million diagnostic tests and cancer treatments using nuclear isotopes yearly in the United States. Yet, 90% of the isotopes used must be imported, because this nation has not developed the facilities to produce isotopes. And in 2005, for no good reason, the Department of Energy shut down the Fast Flux Test Facility in Washington, a reactor designed to produce medical isotopes. As a result, many researchers working on cancer treatments cannot get the short-lived specialty radioisotopes needed for their research.

Nuclear medicine is not limited to cancer treatment. In January, researchers reported that they had successfully sent radioactive bismuth-213 and rhenium-188 to target HIV (AIDS)-virus infected cells in mice. "Both isotopes proved effective in eliminating the virus-infected cells from the mice, and no acute toxicities were noted," researchers stated. They noted that the same type of treatment could be developed for treating people with the AIDS virus, as well as other viral killers such as hepatitis C or Ebola.—*Marjorie Mazel Hecht*