United States General Accounting Office

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Report to the Chairman, Subcommittee on Health, Committee on Ways and Means, House of Representatives

April 1993

SCREENING MAMMOGRAPHY

Higher Medicare Payments Could Increase Costs Without Increasing Use

GAO/HRD-93-50

GAO

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Human Resources Division

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April 22, 1993

The Honorable Fortney H. (Pete) Stark
Chairman, Subcommittee on Health
Committee on Ways and Means
House of Representatives

Dear Mr. Chairman:

This report responds to your request that we review Medicare's payment levels and billing procedures for screening mammography.[1] You asked

- whether payments should be increased to encourage physicians to offer mammography in their offices, thereby expanding the availability and use of this service; and
- whether the procedures for billing Medicare present any particular problems for physicians that contract with leasing firms for screening mammography "packages," which include equipment, technician and radiologist services, and supplies.

Medicare began providing coverage for screening mammography in 1991, but first-year use of this potentially life-saving service was lower than forecast by the Health Care Financing Administration (HCFA), and physicians and others have raised questions about the adequacy of the payment level set by the Congress. Payments that are too low to cover costs can restrict access to medical care by discouraging providers from offering the service. Conversely, our prior work has shown that payments that are too high can result in a needless proliferation of low-volume facilities that have difficulty providing quality services at reasonable costs.[2]

As agreed with your office, we focused our review efforts on analyzing information from relevant studies and data from selected mammography providers and a leasing firm. (See p. 3 for additional information on the scope and methodology of our review.)

[1]Screening mammography is an X-ray examination of a woman without symptoms, performed to detect breast abnormalities before they can be felt by a woman or her physician. Diagnostic mammography is an examination of a woman who already has a symptom, such as a lump, performed to further identify the abnormality.

[2]Medicare: Excessive Payments Support the Proliferation of Costly Technology (GAO/HRD-92-59, May 27, 1992), and Screening Mammography: Low-Cost Services Do Not Compromise Quality (GAO/HRD-90-32, Jan. 10, 1990).

Results in Brief

Increasing the cap on Medicare payments to encourage physicians to offer mammography in their offices is not a cost-effective way to expand the use of screening mammography. A study by the Department of Health and Human Services (HHS) shows that the United States already has more than enough mammography machines, even if all women received screening mammograms at intervals suggested by the National Cancer Institute (NCI). A substantial increase in the Medicare payment to support additional, low-volume machines is likely to increase excess capacity; increase the unit costs and prices for mammograms; and reduce the availability of affordable mammography services.

Inconsistent HCFA guidance and differing Medicare regulations for diagnostic and screening mammography have led to confusion about the appropriate billing procedures for screening mammography provided under package leasing arrangements. The billing procedures currently prescribed by HCFA require physicians to prepare four bills for each screening mammogram, creating an administrative burden for physicians, patients, and claims processing staff. HCFA needs to issue clear billing guidance to the carriers[3] and eliminate the unnecessarily burdensome billing procedures.

Background

The Congress authorized Medicare coverage of periodic screening mammography beginning in January 1991,[4] in response to medical evidence showing that this service can save lives through the early detection and treatment of breast cancer. As shown in appendix I, Medicare coverage for screening mammography varies according to a beneficiary's age. About 19 million Medicare-eligible women qualified for the screening mammography benefit in 1991, and HCFA had forecast first-year utilization of about 4.9 million screening mammograms. However, actual 1991 usage

[3]Carriers are private insurance companies or Blue Shield plans that process and pay Medicare claims for physician services under contract with HCFA, which administers the Medicare program.

[4]The Medicare Catastrophic Coverage Act of 1988, Public Law 100-360, July 1, 1988, included a periodic screening mammography benefit for Medicare-eligible women that would have taken effect in January 1990. However, the benefit was repealed with the enactment of the Medicare Catastrophic Coverage Repeal Act of 1990, Public Law 101-234, on December 13, 1989. The Omnibus Budget Reconciliation Act of 1990, Public Law 101-508, November 5, 1990, restored the screening mammography benefit effective January 1991.

of the Medicare benefit totaled only about 670,000 screening mammograms.[5]

For calendar year 1991, the Congress set a cap of $55 on the fee providers could charge Medicare beneficiaries for screening mammography, thereby limiting both the Medicare payment (80 percent of the fee) and the beneficiary copayment (20 percent of the fee).[6] The cap reflects the low per-patient costs of screening mammography in high-volume settings, such as hospital outpatient departments and screening clinics. The Medicare fee cap, which is updated annually by the percentage increase in the Medicare Economic Index, is $58.29 for calendar year 1993.

Hospitals, clinics for screening and/or treating breast disease, and radiology practices account for most of the approximately 11,000 mammography machines in the United States. Some physicians, particularly those in group practices specializing in obstetrics and gynecology, offer mammography services in their offices. At least one firm offers physicians a mammography leasing package, which includes equipment, technicians, supplies, radiologist services, quality assurance support, and a patient tracking system, all oriented to making it easier for physicians to offer mammography services in their offices.

Women can refer themselves to a mammography facility, but most women who obtain a screening mammogram are referred for one by a physician. Also, although primary care physicians can play a key role in encouraging women to obtain screening mammograms, the lack of physician referral is one of the primary barriers to increasing the use of this service. To help overcome these problems, HHS, which is responsible for providing health information to the public, has a number of educational programs intended to encourage women to obtain screening mammograms.

Scope and Methodology

We obtained information on Medicare payment levels and billing procedures by (1) reviewing legislation and HCFA regulations and guidance, (2) meeting with officials from HCFA's Office of Payment Policy and Office of Coverage and Eligibility Policy, and (3) contacting six Medicare

[5]HHS's Office of the Inspector General is reviewing the possibility that some screening mammograms were inappropriately billed to Medicare as diagnostic mammograms. Diagnostic mammography is not subject to the screening mammography fee cap, but is paid under a Medicare fee schedule that varies by geographic area. In 1992, the fee schedule allowances for diagnostic mammography ranged from $48.83 to $79.10 or up to 39 percent higher than the 1992 screening mammography fee cap of $56.76.

[6]Higher beneficiary copayments apply for services provided by nonparticipating physicians (physicians who have not agreed to accept the Medicare allowance as payment in full for the services).

carriers. We obtained information on the number of screening mammograms allowed by Medicare in 1991 from HCFA's statistical data bases.

We also obtained information on screening mammography equipment, procedures, and guidelines from the American College of Radiology, the American College of Obstetricians and Gynecologists, the American Cancer Society, the Centers for Disease Control, and the Food and Drug Administration.

As identified later in this report, we used data from recent studies on screening mammography prepared by the National Cancer Institute, the Office of Technology Assessment, and the Physician Payment Review Commission. We met the studies' principal authors to discuss their findings.

We obtained pricing information from Spectrascan Imaging Services, Inc., a leading firm offering package leases for mammography equipment, technician and radiologist services, and supplies.

We also obtained information on screening mammography charges and utilization from two high-volume mammography providers. Although not necessarily representative of all such providers, we used their data to supplement information from the studies cited above and establish a price range for comparison with the package leasing arrangements used in relatively low-volume settings. We did not verify providers' data to their accounting records, but we otherwise conducted our review in accordance with generally accepted government auditing standards. We performed our work between March and November 1992.

Increasing the Fee Cap Is Not a Cost-Effective Way to Increase Mammography Use

Increasing Medicare payments to encourage more screening mammography in physicians' offices could increase the cost of a mammogram for all women. Rather than increasing the use of mammography, more low-volume machines and the resultant higher unit costs could discourage some women from obtaining a mammogram. As an alternative to increasing payments, we believe that educating women about the need for periodic screening and encouraging physicians to refer their patients to screening facilities are more promising and cost-effective approaches for increasing the use of screening mammography.

Mammography in low-volume settings is more expensive than in high-volume settings because fixed costs, including the cost of quality assurance, must be spread over fewer patients. Physicians that perform 6 to 8 screening mammograms per day in their offices under the package leasing arrangements offered by Spectrascan Imaging Services, Inc., incur costs of about $80 to $100 per patient, according to Spectrascan officials. By contrast, high-volume screening clinics that perform 30 to 40 mammograms per day charge about $40 to $60 per patient.[7]

Increasing the Medicare fee cap from $58 to as high as $80 to $100 could encourage more screening mammography units in physicians' offices, but, based on our prior work and studies by others, we believe that those additional units would constitute expensive, excess capacity.[8] We recently reported on how the proliferation of magnetic resonance imaging machines in some areas was supported by excessive Medicare payment levels.[9] Similarly, researchers at NCI and the Food and Drug Administration estimated that by 1990 there were already more than enough mammography machines in the United States to handle all the potential need for screening, even if all women complied with NCI's screening mammography guidelines.[10] Although special outreach efforts may be needed to reach women living in some rural areas, NCI found that residents in many rural areas have reasonably convenient access to screening mammography.

Having more screening mammography machines in physicians' offices might increase convenient access to this service for some women, but there is little evidence that Medicare-eligible women would benefit; for other women, access could actually decrease. Mammography fee levels allowed by all insurers could increase with the Medicare fee cap because (1) other insurers tend to follow Medicare policies and (2) patient volumes at existing units would likely decline with the increasing number of facilities.[11] Medicare beneficiaries would have to bear the costs of higher

[7]This range reflects data from The Costs of Providing Screening Mammography, Physician Payment Review Commission Report to Congress, June 30, 1989, and more recent information we obtained from selected mammography providers.

[8]Smaller increases in the fee cap may be warranted to reflect billing and quality assurance costs not included in cost estimates provided to the Congress when the fee cap was established.

[9]GAO/HRD-92-59, May 27, 1992.

[10]Martin L. Brown, Ph.D., and others, "Is the Supply of Mammography Machines Outstripping Need and Demand?" Annals of Internal Medicine, Vol. 113, No. 7 (Oct. 1, 1990), pp. 547-52.

[11]Screening Mammography in Primary Care Settings: Implications for Cost, Access and Quality, Background Paper, Office of Technology Assessment, October 1991.

copayments, and uninsured and low-income women would face higher costs that could further discourage them from seeking a screening mammogram. Furthermore, practices specializing in obstetrics and gynecology have most of the screening mammography machines in primary care settings, but less than 2 percent of all office visits by Medicare-eligible women are to physicians in this specialty. NCI concluded that keeping the price of mammography low would stimulate its increased use and encourage the current public policy trend toward third-party reimbursement for screening mammography.

Rather than having more mammography machines in physicians' offices, recent studies show that educating women about the importance of periodic screening and encouraging physicians to regularly refer women to screening facilities have a strong potential for increasing mammography use. The most common reasons women give for never having had a mammogram are that they did not know they needed one and that their physician had not recommended one.[12]

Improving compliance among older women may require additional efforts. For example, a 1991 NCI survey of women 65 and older found that only 10 percent of women surveyed knew that they were at greater risk for breast cancer as they age, and only 29 percent knew that Medicare pays for screening mammography.[13] Further, several studies have shown that mammography use is lower among women 65 and older than among those under 65. These study findings and the low first-year use of the Medicare screening mammography benefit may indicate the need for stronger programs to educate Medicare-eligible women about mammography and encourage physicians to make regular referrals.[14]

[12]This information was reported by the NCI Breast Cancer Screening Consortium and is based on seven surveys of women aged 50 to 74 years. The survey results were published in the Journal of the American Medical Association, July 4, 1990.

[13]Elizabeth A. Coleman, RNP, Ph.D., and others, "Breast Cancer Screening among Women from 65 to 74 Years of Age in 1987-88 and 1991," Annals of Internal Medicine, Vol. 117, No. 11 (Dec. 1, 1992), pp. 961-66.

[14]In August 1992, we testified that HHS lacks an overall strategy for getting health information to women: HHS does not identify what information is needed, available, or useful; even when produced, the information is not always accessible; and HHS does not routinely evaluate the usefulness of information it produces. Women's Health Information: HHS Lacks an Overall Strategy (GAO/T-HRD-92-51, Aug. 5, 1992).

Guidance on Billing Procedures Has Been Inconsistent and Burdensome

Medicare billing requirements do not specify how physicians should bill for screening mammography services they provide under package leasing arrangements, such as those offered by Spectrascan. HCFA has attempted to resolve billing questions as they arise, but inconsistent HCFA guidance and differing Medicare regulations for diagnostic and screening mammography have led to confusion. Further, we believe that HCFA's current billing guidance imposes an unnecessary administrative burden on physicians, patients, and carriers.

A 1989 HCFA letter sent to Spectrascan and the HCFA regional offices allowed physicians using package leasing arrangements to submit two bills for a mammogram: one to Medicare for the professional and technical components combined[15] and the other to the patient for the copayment. This guidance was not clear concerning billing for the professional component, however, and some carriers required radiologists to bill separately for their interpretation of the mammogram, even though interpretation is part of the package leasing arrangement. Under this requirement, each mammogram requires four bills: two to Medicare (one for the professional component and one for the technical component) and two to the patient for the copayments of the professional and technical services. In 1990, HCFA reversed its 1989 guidance and adopted this more burdensome procedure requiring separate billing for the professional and technical components.

When Medicare coverage for screening mammography began in 1991, determining the correct billing procedure became even more complicated because some Medicare regulations that cover diagnostic mammography and most other physicians' services do not apply to screening mammography. Since coverage began, HCFA has not issued billing guidance specifically addressing screening mammography provided under package leasing arrangements. HCFA told us, however, that its 1990 guidance applies and separate bills are required for the professional and technical components.

We can see no benefit to requiring four bills for each screening mammogram provided under package leasing arrangements. Allowing combined billing would help contain costs and reduce the administrative burden on physicians, patients, and claims processing staff.

[15]The professional component is the fee for the radiologist or other physician that interprets the image, and the technical component covers the cost of producing the image (that is, the cost of the equipment, facility, technicians, and supplies).

Conclusions

Increasing Medicare reimbursement to encourage mammography in physicians' offices is not a cost-effective way to promote screening mammography. Higher Medicare payments would support excess capacity for mammography and might reduce the availability of low-cost screening services. More promising approaches for increasing compliance with screening guidelines are (1) encouraging physicians to regularly refer eligible women for screening mammography and (2) educating women about the need and availability of periodic screening mammograms.

There has been confusion about how to bill for screening mammography provided under package leasing arrangements, and the procedures currently prescribed by HCFA place an unnecessary administrative burden on physicians, patients, and carriers. By providing the carriers with clear billing guidance, HCFA could reduce this confusion and administrative burden.

Recommendations

We recommend that the Secretary of HHS review HHS screening mammography educational programs for both beneficiaries and physicians and determine whether the programs should be strengthened to encourage more Medicare-eligible women to receive mammograms.

We further recommend that the Secretary require the Administrator of HCFA to issue guidance to the carriers allowing combined billing for the professional and technical components of screening mammography services provided under package leasing arrangements.

HHS Comments and Our Evaluation

HHS commented on a draft of our report in a letter dated March 25, 1993 (see app. II). HHS agreed with our conclusions and recommendations. More specifically, HHS agreed to

- continue to look for ways to strengthen public and provider educational programs targeted to the Medicare screening mammography benefit and
- allow combined billing for the professional and technical components of screening mammography services provided under package leasing arrangements.

In a technical comment, HHS stated that the background section of our draft report implied that 30 to 40 mammographies per day are required to recoup fixed costs under the Medicare screening mammography fee cap. We revised the section to remove the implication cited by HHS because we

did not determine the number of mammographies for efficient providers to recoup fixed costs under the fee cap. As discussed on page 5, however, we do compare package leasing costs in low-volume settings with the per-patient charges of high-volume screening clinics performing 30 to 40 mammograms per day.

We also provided additional information in footnote 5 and added footnote 13 to address two additional technical comments by HHS.

As arranged with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days after its issue date. At that time, we will send copies to the Secretary of Health and Human Services and other interested parties.

Please call me on (202) 512-7119 if you or your staff have any questions about this report. Major contributors are listed in appendix III.

Sincerely yours,

Janet L. Shikles

Janet L. Shikles
Director, Health Financing
and Policy Issues

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Abbreviations

GAO	General Accounting Office
HCFA	Health Care Financing Administration
HHS	Department of Health and Human Services
NCI	National Cancer Institute

Medicare Screening Mammography Coverage, by Age

Age[a]	Screening coverage
35-39	A single baseline mammogram for this 5-year period
40-49	Annual coverage for women considered to be at high risk for breast cancer;[b] otherwise, biennial coverage
50-64	Annual coverage
65 and over	Biennial coverage

[a]Eligibility for Medicare and the screening mammography benefit generally begins at age 65, but certain individuals under 65 who are disabled are also eligible.

[b]HCFA considers a beneficiary to be at high risk for breast cancer if one or more of the following conditions apply:
- a personal history of breast cancer;
- a personal history of biopsy-proven benign breast disease;
- a mother, sister, or daughter who has had breast cancer; or
- not having given birth before age 30.

Source: Section 1861 of the Social Security Act (42 U.S.C. 1395x).

Comments From the Department of Health and Human Services

DEPARTMENT OF HEALTH & HUMAN SERVICES — Office of Inspector General

Washington, D.C. 20201

MAR 25 1993

Ms. Janet L. Shikles
Director, Health Financing
and Policy Issues
United States General
Accounting Office
Washington, D.C. 20548

Dear Ms. Shikles:

Enclosed are the Department's comments on your draft report, "Screening Mammography: Higher Medicare Payments Could Increase Costs Without Increasing Use." The comments represent the tentative position of the Department and are subject to reevaluation when the final version of this report is received.

The Department appreciates the opportunity to comment on this draft report before its publication.

Sincerely yours,

Bryan Mitchell

Bryan B. Mitchell
Principal Deputy Inspector General

Enclosure

Comments of the Department of Health and Human Services (HHS) on the General Accounting Office (GAO) Draft Report, "Screening Mammography: Higher Medicare Payments Could Increase Costs Without Increasing Use"

General Comments

We agree with the report's observations and conclusions. Although we need to actively pursue removing financial barriers to screening, numerous studies have shown that ability to pay is not the only, and possibly not the primary, barrier for many women. As the report notes, innovative and proactive public and provider education efforts are crucial. We need to consistently and aggressively emphasize the value of screening mammography to women and health care providers.

GAO Recommendation

We recommend that the Secretary of HHS review HHS screening mammography educational programs for both beneficiaries and physicians and determine whether the programs should be strengthened to encourage more Medicare-eligible women to receive mammograms.

Department Comment

We concur. Mammography screening education programs designed to increase utilization of the Medicare benefit have been and continue to be developed. We are continually looking for ways to strengthen and improve the effectiveness of these and all of our education programs.

The National Cancer Institute (NCI) is currently engaged in its second survey of Medicare beneficiaries concerning knowledge, attitudes, and practices related to mammography. This survey should, especially when combined with analyses of extant Health Care Financing Administration (HCFA) data bases and with the first survey, provide guidance on strategies that might be useful to increase screening among those women who could benefit from this potentially life-saving technology.

Currently, NCI collaborates with the National Institute on Aging, the Centers for Disease Control and Prevention (CDC), HCFA, and the American Association of Retired Persons (AARP) in a campaign to educate older women about mammography and the Medicare benefit. The program includes a video news release, a special brochure, public service announcements featuring well known women, and articles in AARP publications that are read by 30 million people. The Cancer Information Service toll free number (1-800-FOR-CANCER) is included in all outreach efforts. Additional work is done by NCI regional offices through State health departments, Area Agencies

on Aging, other health related agencies and private organizations, and AARP chapters. NCI also funds research aimed at identifying barriers to compliance with screening recommendations and evaluating the effectiveness of interventions to increase utilization. Results of this research are available for public and private sector use in conducting additional interventions.

The Congress has given the CDC responsibility for developing and implementing the "National Breast and Cervical Cancer Early Detection Program." This unique public health program is guided by CDC in partnership with State health agencies and national partners like the American Cancer Society, AARP, Elderly Health Screen, Young Women's Christian Association, American College of Physicians, American Nurses' Association, American Medical Women's Association, National Medical Association, and the National Alliance of Breast Cancer Organizations. This program provides a foundation through which many of the challenges raised by this report can be addressed. The "Put Prevention Into Practice" campaign being designed by the Public Health Service should also help to increase the appropriate use of mammography services among Medicare enrollees.

We will continue to review our education programs and coordinate national public and provider information efforts that are targeted to the Medicare screening mammography benefit.

GAO Recommendation

We further recommend that the Secretary require the Administrator of HCFA to issue guidance to the carriers allowing combined billing for the professional and technical components of screening mammography services provided under package leasing arrangements.

Department Comment

We concur. HCFA will issue the necessary Medicare Carriers Manual instructions.

Technical Comments

Text deleted.

Page 3, Paragraph 2: The paragraph implies that under the Medicare screening mammography fee cap, 30 to 40 mammographies per day are required to recoup fixed costs. Costs can be recovered within the fee cap with as few as 25 mammograms per day if the professional (interpretation) fee is kept to $12 or less. This can be accomplished by using batch interpretation, a procedure currently used by about 20 percent of facilities.

Now on p. 3.

Page 3 Footnote 5: The report should cite the source of the statement that Medicare payments for diagnostic mammograms were only 39 percent higher than for screening mammograms. We would like to know whether this figure is an average or a median.

Now on p. 6.

Page 7, Paragraph 2: The citation for the NCI survey described in this paragraph is: Coleman, A.C., Feuer, E.J. and the NCI Breast Cancer Screening Consortium (1992). Breast Cancer Screening Among Women from 65 to 74 Years of Age in 1987-88 and 1991. Annals of Internal Medicine, 117:961-6.

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