Department of Health and Human Services

OFFICE OF INSPECTOR GENERAL

Portable Imaging Services:

A Costly Option

JUNE GIBBS BROWN
Inspector General

NOVEMBER 1997
OEI-09-95-00090

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EXECUTIVE SUMMARY

PURPOSE

This inspection determined how different billing practices, financial arrangements, and clinical settings affect the cost of imaging services for the Medicare program and its beneficiaries.

BACKGROUND

Nursing homes* arrange for ancillary services--such as x-rays--for patients who require them. In some instances, firms known as ***portable x-ray suppliers*** provide the x-ray and electrocardiogram (EKG) services in nursing homes.** Imaging services consist of several components--technical, professional, transportation, and setup--depending on (a) the type of service and (b) where and by whom it is rendered.

Portable x-ray and EKG services provided to nursing home patients may be billed either by a skilled nursing facility to the Part A fiscal intermediary or by the portable supplier to the Part B carrier. ***"Direct billing"*** occurs when the portable supplier bills the carrier. ***"Billing under arrangement"*** occurs when, based on a contractual agreement, a skilled nursing facility bills the fiscal intermediary and pays the portable supplier for services rendered. Skilled nursing facilities may bill under arrangement even for patients who are not in Part A-covered stays.

We examined a stratified random sample of 729 imaging services that were provided while the beneficiaries were nursing home residents in 1994.

FINDINGS

Overall, we found that Medicare pays too much for portable imaging services. Medicare could save as much as $66 million in 1 year and $361 million over 5 years, based on the following findings and recommendations:

Portable chest x-rays cost far more than non-portable chest x-rays

Portable chest x-rays may cost up to nine times more than non-portable chest x-rays. Portable x-ray suppliers performed more than 60 percent of chest x-rays rendered to

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* For purposes of this inspection, *nursing homes* refers to skilled nursing, Medicaid nursing, board and care, assisted living, and retirement facilities collectively. Where appropriate, we distinguish between skilled nursing facilities and these other facilities.

** Other options for nursing homes include providing the service with their own equipment or transporting patients to hospital outpatient departments, imaging centers, physician offices, or other facilities for x-rays or EKGs.

nursing home residents in 1994. In general, portable chest x-rays cost more because Medicare allows a transportation charge, which comprises most of the cost of the service.

Medicare pays more than twice as much for imaging services when they are billed under arrangement rather than when payment is limited to the fee schedule

In 1994, Medicare paid $14.7 million more for portable chest x-rays and EKGs provided under arrangement than it would have if payment were limited to the carrier fee schedules. This occurs because (1) portable x-ray suppliers negotiate contracts with skilled nursing facilities to ensure that they receive as much as six times more than fee schedules would allow and (2) skilled nursing facilities mark up these already inflated charges as much as 250 percent for overhead and expenses. In addition, we estimate that Medicare spent $9 million more in 1994 on other radiological services billed under arrangement than it would have if payments for those services had been limited by the fee schedules.

On average, portable suppliers who bill under arrangement receive double what the fee schedule would allow

Portable x-ray suppliers negotiate contracts with skilled nursing facilities to receive more (as much as six times more) than the Medicare fee schedule would allow. Portable x-ray suppliers charge radically different amounts to neighboring skilled nursing facilities.

Skilled nursing facilities receive millions of dollars that they would not receive if they did not bill under arrangement

Skilled nursing facilities mark up portable chest x-ray costs as much as 250 percent above what portable x-ray suppliers bill them. This totaled $8.1 million in 1994.

Medicare pays for services under arrangement that it would not cover if billed directly

Services billed under arrangement are not subjected to the same routine screens and edits as directly billed services are. As a result, skilled nursing facilities are reimbursed for charges that would be denied if the portable supplier billed directly. These reimbursements include (1) setup charges for portable EKG equipment, (2) after-hours or emergency charges, (3) transportation charges not prorated when multiple patients are seen, (4) medically unnecessary or duplicate services, and (5) portable equipment transportation and setup charges when only a portable technician is provided.

Beneficiaries' copayments for services billed under arrangement are almost three times more than they would be if the services had been billed directly

The combination of three factors--inflated supplier charges to skilled nursing facilities, excessive markups by these facilities, and the Medicare policy that beneficiary copayments are 20 percent of *billed* amounts for ancillary services--results in vastly higher costs to beneficiaries and secondary payers.

The amounts that Medicare carriers allow for transportation of portable x-ray equipment vary widely, and some are excessive

In 1994, carrier allowances for portable x-ray transportation when one patient was seen ranged from $10.00 to $186.39. Although Medicare requires carriers to prorate transportation charges when multiple patients are seen at one nursing home, not all carriers do this correctly. There is no statutory authority for the Health Care Financing Administration (HCFA) to allow setup charges. The HCFA recently used the lack of statutory authority as a rationale for eliminating reimbursement for EKG transportation.

RECOMMENDATION

In the draft of this report, we recommended that HCFA:

- *instruct fiscal intermediaries to never pay more than the fee schedule amount for portable imaging services billed under arrangement;*
- *require fiscal intermediary edits and Common Procedure Coding System codes on all claims to discontinue payments for non-covered services;*
- *require fiscal intermediaries to disallow any skilled nursing facility overhead associated with portable imaging services; and*
- *convert transportation reimbursement rates to a national fee schedule, rebundle equipment setup with transportation, and remind carriers that they must prorate transportation charges when multiple patients are seen at the same facility.*

We projected 5-year Medicare savings of $360.9 million for these recommendations, as indicated in the following table:

Projected Medicare savings from implemented recommendations		
Option	1-year savings	5-year savings
Limit payment for services billed under arrangement to fee schedule	$ 28.3 million	$160.4 million
Limit transportation to $70 per beneficiary-service day (the national median), $35 if 2 beneficiaries are seen during the same trip, etc.	$ 21.8 million	$126.6 million
Stop paying for setup	$ 15.7 million	$ 73.9 million
TOTALS	**$ 65.8 million**	**$360.9 million**

The HCFA concurred with the majority of the recommendations in our draft report but did not concur with our recommendations that it (1) disallow any skilled nursing facility overhead associated with portable imaging services and (2) rebundle the equipment setup charge with transportation.

After we released our draft report, President Clinton signed into law the Balanced Budget Act of 1997. Among the provisions in this law, it (1) establishes a prospective payment system for beneficiaries in Part A-covered stays in skilled nursing facilities, to be phased in over several years; (2) requires that all Part B items and services furnished to residents of nursing homes (not covered under Part A) be billed by the nursing homes as part of a consolidated billing system; (3) limits reimbursement for services paid under consolidated billing to the Part B fee schedule; and (4) requires HCFA Common Procedure Coding System codes for services provided to skilled nursing facility patients that are billed to fiscal intermediaries.

We believe that implementation of the Balance Budget Act will address our findings and the intent of our recommendations. We are concerned, however, that the cost of ancillary services has been inflated by the practices described in this report. Therefore, we recommend that HCFA:

- ***take into account the inflated payments that have been made for portable imaging services when it implements the prospective payment and Part B provisions of the Balanced Budget Act, seeking legislative authority if necessary.***

  The HCFA should take into account the inflated charges for (1) services billed under arrangement (including payments for services that were non-covered) and (2) transportation charges that were excessive or prorated incorrectly.

Operation Restore Trust

In May 1995, President Clinton and Health and Human Services Secretary Donna Shalala announced the kickoff of Operation Restore Trust (ORT), a crackdown on Medicare and Medicaid fraud, waste, and abuse in home health agencies, nursing homes, and durable medical equipment suppliers. The ORT focused on the five States--California, New York, Florida, Texas, and Illinois--that account for 40 percent of the nation's Medicare beneficiaries and program expenditures. This was an ORT inspection. A companion report, "Portable Imaging Services: Nursing Home Perspectives" (OEI-09-95-00091), describes when, how, and why nursing homes use portable imaging services. Another companion report, "Imaging Services for Nursing Home Patients: Medical Necessity" (OEI-09-95-00092), assesses the medical necessity and quality of care.

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INTRODUCTION

PURPOSE

This inspection determined how different billing practices, financial arrangements, and clinical settings affect the cost of imaging services for the Medicare program and its beneficiaries.

BACKGROUND

Medicare (Parts A and B)

Congress enacted Medicare in 1965 to provide health services to the elderly and disabled. The program consists of two distinct parts. The first part is hospital insurance or **Part A**. Part A covers services furnished by *providers*, i.e., hospitals, home health agencies, and skilled nursing facilities. The second part, supplementary medical insurance or **Part B**, covers a wide range of medical services and supplies. These include physician services, outpatient hospital services, diagnostic laboratory tests, x-rays, ambulance services, and durable medical equipment.

The Health Care Financing Administration (HCFA) administers Medicare and contracts with private insurance companies to process and pay claims. Contractors that process Part A claims are referred to as ***fiscal intermediaries***. Contractors that process Part B claims are called ***carriers***.[1] Some companies have both fiscal intermediary and carrier contracts.

The HCFA provides substantial guidance to fiscal intermediaries and carriers on applicable laws, regulations, national polices, fee schedules, and other requirements. In some areas, Federal law and HCFA allow the fiscal intermediaries and carriers considerable latitude in determining both coverage and reimbursement.

Skilled nursing facilities and other extended care facilities

Medicare beneficiaries recuperating from an acute episode may be eligible for post-acute skilled nursing services. The Medicare program provides coverage under Part A for skilled nursing services but not for custodial care. The skilled nursing benefit includes:

- nursing care,
- bed and board,
- physical, occupational, or speech therapy,
- medical social services, and
- drugs, biologicals, supplies, appliances, and equipment for use in the facility.

[1] An exception to this general rule is that fiscal intermediaries process Part B claims submitted by hospitals (for inpatient and outpatient services), home health agencies, and skilled nursing facilities.

Medicare law stipulates that beneficiaries are eligible for skilled nursing benefits if they are transferred to the skilled nursing facility after a minimum 3-day covered stay in an acute hospital. The patient must require skilled nursing care, and a physician must order the services. Part A covers skilled nursing services for up to 100 days per "spell of illness."

In addition to skilled nursing facilities, other facilities offer varying levels of care for Medicare beneficiaries. These include Medicaid nursing, board and care, assisted living, and retirement facilities. ***We have included all of these facilities in the scope of this study and refer to them collectively as "nursing homes." We do, however, refer to skilled nursing facilities specifically where findings pertain solely to these entities.***

Portable x-ray and EKG services

Nursing homes provide directly or arrange for ancillary services--such as x-rays--for their patients who require them. In some instances, firms known as ***portable x-ray suppliers*** provide portable x-ray and electrocardiogram (EKG) services in nursing homes.[2] Medicare's portable x-ray benefit covers skeletal films of the arms, legs, pelvis, vertebral column, and skull as well as chest and abdominal films that do not use contrast media.

Medicare also covers EKG services under the portable benefit, if they are medically necessary and are performed by certified portable x-ray suppliers. All of these services must be diagnostic rather than therapeutic. Portable x-ray suppliers must meet HCFA's conditions of participation to receive reimbursement for these services. These conditions of participation require, among other things, that suppliers comply with State and local laws, which may provide for the licensing and regulation of portable suppliers. The HCFA, however, eliminated reimbursement for portable EKG transportation in November 1996.

According to Medicare regulations, all portable x-ray services must be ordered by a physician. The physician's signed order must specify the reason why the x-ray is being taken, the area of the body to be exposed, the number of x-rays to be taken, and the views needed. The physician also must justify the need for *portable* services.

Portable x-ray suppliers must maintain records for each patient. These records should include the examination date, a description of the x-rays that were taken, the name of the referring physician, the equipment operator, the physician to whom the x-rays were sent for interpretation, and the date the x-rays were sent to that physician.

[2] Other options for nursing facilities include transporting patients to hospital outpatient departments, imaging centers, physician offices, or other facilities for x-rays or EKGs.

Billing for portable x-ray and EKG services

Billing components

Imaging services consist of several components, depending on the type of service and where and by whom it was rendered:

- **Technical:** All of the activities that are necessary in the actual taking of the x-ray, e.g., developing and delivering the x-ray as well as overhead expenses and supplies.

- **Professional:** Interpretation by a certified radiologist.

- **Transportation:** Moving portable x-ray equipment to a nursing home. In general, HCFA allows a single transportation charge for each trip that a portable x-ray supplier makes to a particular location. When more than one patient is x-rayed at a single location, the single allowable charge is prorated among all patients receiving these services.

- **Setup:** Preparing x-ray equipment for use at a patient's bedside. A separate setup charge is allowed for each body part x-rayed.

Billing methods

Portable x-ray and EKG services provided to nursing home patients may be billed by a skilled nursing facility to the Part A fiscal intermediary or by the portable supplier to the Part B carrier. When the services are provided to a skilled nursing facility, the facility and the portable supplier decide who will bill for the services. When the portable supplier bills the Part B carrier, this is called ***"direct billing."*** When a skilled nursing facility bills the Part A fiscal intermediary and pays the portable supplier for services rendered, this is called ***"billing under arrangement."*** Skilled nursing facilities may bill under arrangement even for patients who are not in Part A-covered stays. In these cases, the skilled nursing facility includes a code on the claim that denotes that the beneficiary is not covered under Part A.

When the claim is processed by the fiscal intermediary, reimbursement is based on the annual cost report submitted by the skilled nursing facility to its fiscal intermediary. When the claim is processed by the carrier, reimbursement is based on a combination of a reasonable charge determination and the national fee schedule.

These different billing methods can result in vastly different costs to the Medicare program and its beneficiaries, particularly when one compares reimbursement made by the fiscal intermediary to that made by the carrier. The table on the following page illustrates the differences between these two billing methods:

Comparison of different billing methods for portable x-ray services		
	Portable supplier bills carrier directly	*Skilled nursing facility bills under arrangement to fiscal intermediary*
Medicare payment mechanism	National fee schedule/reasonable charge blended rate.	Reasonable cost. Intermediary may refer to fee schedule to determine what is reasonable but is not required to use it.
Portable x-ray supplier is reimbursed	80 percent of allowed amount (paid by carrier).	100 percent of supplier's charge, based on contract with skilled nursing facility (paid by skilled nursing facility).
Nursing home/skilled nursing facility is reimbursed	Nothing.	Supplier's charge plus skilled nursing facility's overhead charges.
Beneficiary copayment	20 percent of allowed amount.	Patients in Part A-covered stays pay coinsurance for day 20 through day 100. Patients covered solely by Part B pay 20 percent of the billed amount regardless of when the service is provided.
Adjustments to payment	No routine post-payment adjustments.	The skilled nursing facility submits an annual cost report. Through audits, the intermediary determines whether the costs are reasonable and reconciles any difference between interim payments and final allowable cost.

Previous work on costs of imaging services

In 1991, the Office of Inspector General (OIG) issued a report entitled "Study of Costs and Payments for Portable X-Ray Services" (A-01-90-00517). This report found that (1) payment levels for portable x-ray services remained consistent when converted from a reasonable charge system to a fee schedule and (2) two carriers allowed payments for portable x-ray transportation that were significantly more than the amount allowed before the fee schedule was implemented. The report also discussed the pros and cons of adopting a separate fee schedule for portable x-ray services.

In 1992, HCFA's Seattle regional office wrote a memorandum to headquarters detailing excessive skilled nursing benefit payments made for portable x-ray services provided under arrangement. The memorandum analyzed reimbursement policies, complaints from beneficiaries and other portable x-ray suppliers, and claims from three skilled nursing facilities.

Operation Restore Trust

In May 1995, President Clinton and Health and Human Services Secretary Donna Shalala announced the kickoff of Operation Restore Trust (ORT), a new health care anti-fraud initiative. The ORT began as a 2-year crackdown on Medicare and Medicaid fraud, waste, and abuse in home health agencies, nursing homes, and durable medical equipment suppliers. It focused on the five States--California, New York, Florida, Texas, and Illinois--that account for 40 percent of the nation's Medicare beneficiaries and program expenditures.

The ORT included Federal and State agencies in collaboration with private sector entities and beneficiaries. The Federal agencies involved in this effort include the OIG, HCFA, and the Administration on Aging. The OIG undertook a number of national program inspections aimed at identifying and eliminating systemic weaknesses that allow fraud, waste, and abuse to occur in the areas of home health, nursing homes, and durable medical equipment. This inspection was conducted as part of ORT.

A companion report, "Portable Imaging Services: Nursing Home Perspectives" (OEI-09-95-00091), describes when, how, and why nursing homes use portable imaging services. Another companion report, "Imaging Services for Nursing Home Patients: Medical Necessity" (OEI-09-95-00092), assesses the medical necessity and quality of care.

METHODOLOGY

From a 1 percent simple random sample of the Common Working File (CWF), we extracted data on all beneficiaries who were in a nursing home or who received a portable imaging service at any time during calendar year (CY) 1994. We then extracted claims data on all imaging services provided to these beneficiaries during CY 1994.

We identified these nursing home residents through several indicators in the claims data. These indicators included place of service, hospital discharge destination, skilled nursing claims, and HCFA Common Procedure Coding System (HCPCS) codes that are likely to correspond to a nursing home resident (such as transportation of portable x-ray equipment). Based on a pre-test of this approach, we estimate that our database included approximately 93 percent of all imaging services provided to nursing home residents.

From this newly created database, we selected a stratified random sample of 729 imaging services that were provided while the beneficiary was a nursing home resident. The strata are illustrated in the table on the following page:

Stratified sample of selected imaging services			
Stratum			Sample size
Chest x-rays (HCPCS = 71010 through 71035)	Billed as part of Part-A nursing stay	ORT States	53
		Non-ORT States	32
	All other billing arrangements	ORT States	134
		Non-ORT States	60
EKGs (numerous HCPCS codes)		ORT States	143
		Non-ORT States	65
Computerized axial tomography and magnetic resonance imaging (numerous HCPCS codes)		ORT States	167
		Non-ORT States	75

When there was no skilled nursing facility claim overlapping the date of the imaging service in our sample, we attempted to verify that the beneficiary was a nursing home resident by contacting providers and nursing homes. We excluded beneficiaries from our calculations if they did not reside in skilled nursing, Medicaid nursing, board and care, assisted living, or retirement facilities when they received the imaging service in our sample. This included patients who were hospital inpatients. We also found several billing errors that incorrectly stated that an imaging service had been provided, and we removed these beneficiaries from the sample. We undertook a number of steps to determine how much was billed and paid for services provided under arrangement:

- *Breaking down cost components of claims submitted to fiscal intermediaries:* For each beneficiary with a fiscal intermediary claim covering the date of the service in our sample, we requested information from the skilled nursing facilities about the cost components of each claim. For example, for contracted portable x-ray services, we requested the amount that the skilled nursing facility paid the portable supplier for the services and other costs that were included in the claim.

- *Determining whether Part B claims submitted to fiscal intermediaries were actually for portable services billed under arrangement:* These claims do not indicate whether the service was provided in a hospital outpatient department or whether it was portable, provided in a skilled nursing facility, and billed under arrangement for a beneficiary covered only under Part B. To make this distinction, we obtained medical records from the facilities that submitted these claims and the physicians who submitted Part B claims for the professional component. These records showed whether a portable supplier provided the service.

- *Determining allowed amounts for skilled nursing facilities that bill under arrangement:* We subsequently obtained cost-to-charge ratios for each skilled nursing facility that submitted a claim to the fiscal intermediary for radiology

and/or EKG services in order to estimate how much Medicare allowed for individual services in our sample.

- *Applying fee schedules to services billed under arrangement:* Using our sample of patients for whom an "under arrangement" claim was submitted, we obtained from carriers the amount that Medicare would have allowed for the claim if the service had been billed directly.

- *Determining allowed amounts for services provided by outpatient departments and skilled nursing facilities that provide services directly using their own equipment:* We obtained radiology and/or EKG cost-to-charge ratios for these facilities.

- *Determining beneficiary copayments:* We obtained copies of the Explanation of Medicare Benefits for all beneficiaries for whom a claim had been submitted to the fiscal intermediary. Because beneficiaries are not required to pay a copayment for the first 20 days of a Part A stay and then are required to pay a daily bundled coinsurance for subsequent days, we assumed that their coinsurance for a single imaging procedure would be $0. We assumed that Part B coinsurance would be 20 percent of the charge.

We conducted interviews with the 93 nursing homes that we verified had provided a portable chest x-ray for the patients in our sample. We asked the nursing homes how they provide services, how they bill for them, and their rationale for these decisions. For skilled nursing facilities that bill under arrangement, we obtained copies of their contracts with portable suppliers.

To gather additional information on imaging services provided to nursing home patients, we conducted interviews with carriers and fiscal intermediaries. Among other issues, we asked questions about (1) their coverage, payment, and audit guidelines, (2) the safeguards they have in place to detect and prevent inappropriate services and billing, (3) how they developed their reimbursement schedules for portable x-ray transportation, and (4) if they had conducted any studies concerning imaging services for nursing home patients.

For all claims, we requested medical records and original x-rays, EKGs, magnetic resonance images (MRIs), and computerized axial tomography (CAT) scans. These records were evaluated by a medical review contractor for medical necessity and are the subject of our report, "Imaging Services for Nursing Home Patients: Medical Necessity."

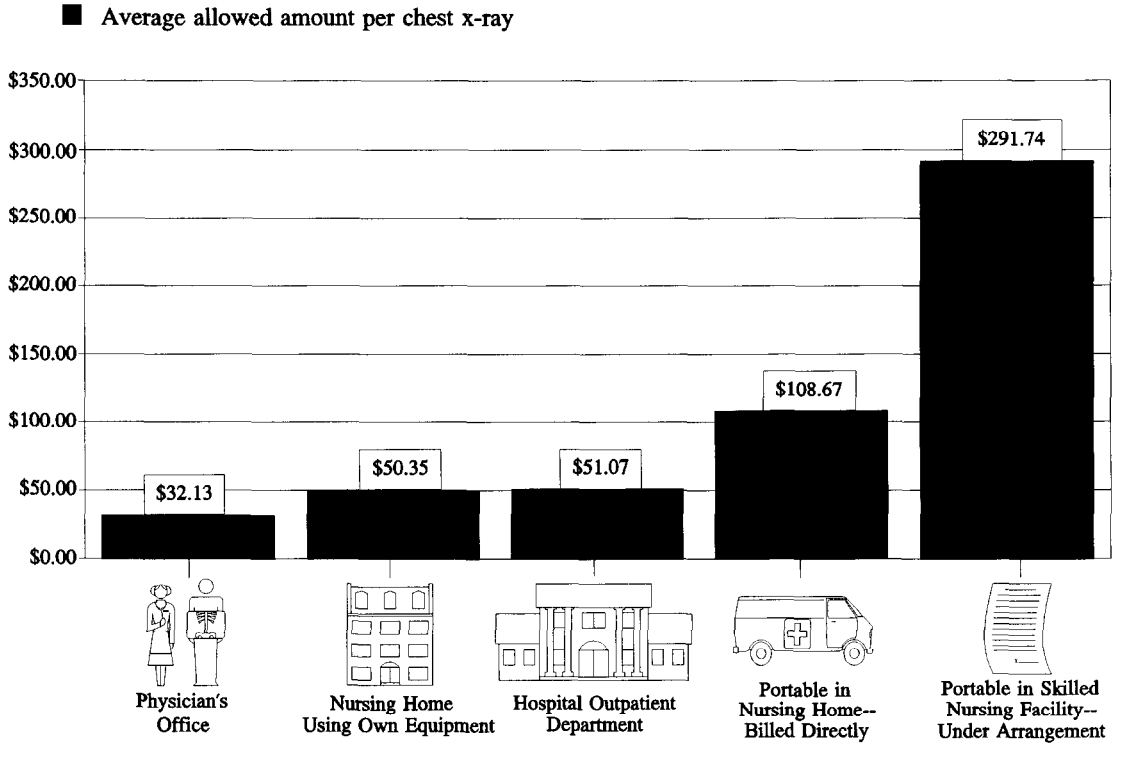
Based on our findings from the sample, we projected Medicare costs and savings to all radiological services referenced in the report. For further information about our calculations, see appendices B and C.

Because this report focuses on portable imaging services, the findings and recommendations pertain to chest x-rays and EKGs only. While MRIs and CAT scans might be provided by portable suppliers in the future, no patients in our sample received portable MRIs or CAT scans.

Portable chest x-rays cost far more than non-portable chest x-rays

Portable chest x-rays may cost up to nine times more than non-portable chest x-rays. If a physician or nursing home owns and uses its own x-ray equipment, the cost to Medicare is always substantially less than when a portable supplier is used. The following graphics illustrate the stark differences in costs of nursing home resident chest x-rays taken in 1994:

Portable chest x-rays billed under arrangement are the most costly



Most chest x-rays provided to nursing home patients are taken by portable x-ray suppliers. They performed more than 60 percent of chest x-rays rendered to nursing home patients in 1994. The chart on the following page shows the different options for providing x-ray services to nursing home residents and how they were utilized in 1994:

Most chest x-rays for nursing home residents are performed in nursing homes	
Options	Percent of chest x-rays
Nursing home, portable, billed directly	55.3
Skilled nursing facility, portable, billed under arrangement	6.3
Nursing home, using own equipment	13.8
Hospital outpatient department	20.9
Physician's office	3.7

Portable chest x-rays cost more because (1) Medicare allows a transportation charge which frequently is the most expensive cost component; (2) for each body part x-rayed, Medicare allows a separate setup charge; and (3) Medicare allows portable services to be billed under arrangement. When services are billed under arrangement, fiscal intermediaries generally do not limit how much suppliers can charge to skilled nursing facilities or how much these facilities can inflate these charges.

Chest x-rays performed in physician offices, using the physician's own equipment, cost less than those provided in other settings because physicians can bill only for technical and professional components. Carriers pay both of these components under the fee schedule. In 1994, however, less than 4 percent of chest x-rays for nursing home residents were provided in physicians' offices.

Many nursing home residents receive chest x-rays in hospital outpatient departments or in nursing homes--primarily skilled nursing facilities--that own their equipment. In these cases, either the outpatient department or skilled nursing facility submits claims to the fiscal intermediary for the technical component. Although no transportation or setup charges are billed, the facility bills for overhead. In 1994, approximately 13.8 percent of chest x-rays performed on nursing home residents were provided using nursing home equipment. In 1994, hospital outpatient departments performed 20.9 percent of chest x-rays for nursing home residents.

Medicare pays more than twice as much for imaging services when they are billed under arrangement rather than when payment is limited to the fee schedule

In 1994, Medicare paid $14.7 million more for portable chest x-rays and EKGs provided under arrangement than it would have if payment were limited to the carrier fee schedules (i.e., $24.4 million versus $9.7 million). Every portable chest x-ray and EKG billed under arrangement costs Medicare more than if the same service had been billed directly and limited to the fee schedules. This occurs because (1) portable x-ray suppliers negotiate contracts with skilled nursing facilities to ensure that they receive more--

sometimes as much as six times more--than fee schedules would allow and (2) skilled nursing facilities mark up these already inflated charges as much as 250 percent for, what they claim constitutes, overhead and expenses. Overall, approximately 10.2 percent of portable chest x-rays and EKGs provided to nursing home residents in 1994 were billed by skilled nursing facilities under arrangement. Some policy makers have suggested, however, that all ancillary services should be billed by nursing homes.

Other radiological services billed under arrangement also cost Medicare more than they would if they were limited to fee schedules. In reviewing the contracts negotiated between portable suppliers and skilled nursing facilities, we found that these facilities pay considerably more than the fee schedule would allow for all portable imaging services. Using the 1 percent sample and our data on chest x-rays and EKGs, we estimate that Medicare spent $9 million more in 1994 on other radiological services billed under arrangement than it would have if payments for those services had been limited by the fee schedules. For further information about how we estimated this cost, see appendix C.

On average, portable suppliers who bill under arrangement receive double what the fee schedule would allow

Portable x-ray suppliers negotiate contracts with skilled nursing facilities that ensure higher reimbursement than the Medicare fee schedule would allow. At the same time, they actually reduce their administrative expenses because the skilled nursing facilities bill Medicare, other payors, and beneficiaries. In 1994, portable x-ray suppliers received $10.7 million from Medicare and its beneficiaries for chest x-rays and EKGs that they would not have received if they had billed directly.

Portable suppliers always receive more when services are billed under arrangement than they would if they billed directly. Some portable suppliers receive almost six times the fee schedule amount for specific components, as the following table illustrates.

Billing under arrangement allows portable suppliers to skirt fee schedules

HCPCS	Description	Fee Schedule	Under Arrangement
71020TC	Two-view chest x-ray--technical component	$15.05	$87.50
R0075	Portable x-ray transportation--2 patients seen	$19.12	$95.00

Skilled nursing facilities that bill under arrangement rarely are prudent buyers. Portable x-ray suppliers charge radically different amounts to neighboring skilled nursing facilities. We obtained contracts showing several instances where skilled nursing facilities in the same city paid widely varying amounts for the same services. The following table illustrates these differences.

Some skilled nursing facilities pay significantly higher prices for imaging services than neighboring facilities			
HCPCS	Description	Skilled Nursing Facility "A"	Skilled Nursing Facility "B"
71010	Chest x-ray, 1-view	$18	$55
71020	Chest x-ray, 2-view	$18	$65
R0070 and R0075	Transportation--per patient	$20	$90
Q0092	Portable x-ray setup charge--per procedure	$0*	$25

** Setup charge is included as part of the transportation charge*

During interviews with the administrators of these skilled nursing facilities, we determined that skilled nursing facility "A" routinely solicits bids for portable imaging service contracts, thus ensuring competitive charges. Skilled nursing facility "B" was more typical of facilities that bill under arrangement in that it had an on-going arrangement with one supplier for several years. In these cases, we found that it was rare for the facilities to solicit bids, negotiate, or periodically "shop the market" to find out what other suppliers would charge.

Skilled nursing facilities receive millions of dollars that they would not receive if they did not bill under arrangement

Skilled nursing facilities mark up portable chest x-ray costs as much as 250 percent above what portable x-ray suppliers bill them. Although the amount paid by Medicare is adjusted through cost reports, both Medicare and its beneficiaries paid skilled nursing facilities $8.1 million in 1994 to bill for portable chest x-rays and EKGs--$8.1 million that they would not have paid if the services had been billed directly by portable x-ray suppliers.

For the most part, skilled nursing facility administrators could not explain why their facilities billed under arrangement. The most common response was simply that the facility had billed under arrangement prior to their arrival and they maintained the status quo. For a more complete discussion of the responses we received from administrators, see our companion report, "Portable Imaging Services: Nursing Home Perspectives."

Medicare pays for services under arrangement that it would not cover if billed directly

Fiscal intermediaries do not apply the same routine screens and edits to services billed under arrangement that carriers apply to services billed directly. As a result, skilled

nursing facilities are reimbursed for charges that would have been denied if the portable supplier had billed a Medicare carrier directly. Some examples include:

- ***Setup charges for portable EKG equipment.*** Medicare policy excludes payment for setting up portable EKG equipment. Nevertheless, we found that skilled nursing facilities routinely pay portable suppliers for EKG setup. They subsequently bill and receive payment from intermediaries for these charges.

- ***After-hours or emergency charges.*** While carriers indicated that they would not allow these charges, portable suppliers who bill under arrangement received as much as $66 extra for providing services on an emergency, nighttime, or weekend basis. In one instance, a supplier received both an emergency and after-hour payment for a single service, totaling $90.

- ***Transportation charges not prorated when multiple patients are seen.*** Under direct billing, when a portable supplier provides services to more than one patient at a nursing home, Medicare requires that the transportation charge be allocated to each patient so that the total amount allowed for transportation is always the same. However, suppliers' contracts with skilled nursing facilities almost never prorate. For example, one portable supplier received $99 per patient, regardless of how many patients he saw in one visit. In addition, there is no way under the present system that an intermediary or other oversight agency can determine how many patients were seen at a particular skilled nursing facility during the same visit unless it conducts an extensive and expensive audit of patient records.

- ***Medically unnecessary or duplicate services.*** Because Part A claims do not list individual services that a patient received, it is difficult to determine whether a specific service is medically necessary or whether the charge for an individual service is excessive. In addition, fiscal intermediaries do not perform routine edits to determine if a beneficiary is receiving multiple or duplicate services, such as a daily chest x-ray, on a routine basis.

- ***Portable equipment transportation and setup charges when only a portable technician is provided.*** In at least one case, we determined that a skilled nursing facility had x-ray equipment on-site but required a technician to operate the equipment. According to Medicare regulations, this is not a portable service and the facility should have paid only a technical component charge and billed Medicare accordingly. Instead, they paid the supplier for setup and transportation charges in addition to the technical component, marked up the charges, and billed the full amount, including mark-up, to Medicare.

Contracts that bundle individual components make it difficult to review and compare costs. Even if intermediaries attempted to apply prudent buyer principles to specific services, the contracts sometimes are difficult to interpret. For example, some supplier contracts bundle the transportation and technical components, making it difficult to

determine which component might be overpriced. Other bundling combinations include (1) the transportation and setup components and (2) the technical and setup components.

Beneficiary copayments for services billed under arrangement are almost three times more than they would be if the services had been billed directly

The combination of three factors--inflated supplier charges, excessive markups by skilled nursing facilities, and the Medicare policy that beneficiary copayments are 20 percent of *billed* amounts for ancillary services--results in vastly higher costs to beneficiaries and secondary payors when services are billed under arrangement. This is particularly true when a beneficiary is in a non-covered stay. Beneficiaries whose stays are covered by Part A pay less because they pay no coinsurance during the first 20 days of their stay. In 1994, beneficiaries paid $6.5 million in copayments for services billed under arrangement for which they would have paid $2.4 million if the services had been billed directly.

When a beneficiary has Part B coverage only and the skilled nursing facility bills under arrangement, the beneficiary's copayment skyrockets. The following table illustrates how one beneficiary in our sample incurred a higher copayment because his skilled nursing facility billed under arrangement:

Billing under arrangement costs beneficiaries more		
	If billed under arrangement:	If billed directly:
Total charge billed to Medicare	$250.21	N/A
Total allowed amount		$101.74
71020--chest x-ray, 2 views, technical component		$27.53
Q0092--setup		$13.31
R0070--transportation, 1 patient seen		$60.90
Beneficiary copayment--technical components	**$50.04** (20 percent of billed amount)	**$20.35** (20 percent of total allowed amount)

The amounts that Medicare carriers allow for transportation of portable x-ray equipment vary widely, and some are excessive

Even when portable imaging services are billed directly, portable x-ray transportation charges and allowed amounts can vary considerably. In 1994, carrier allowances for portable x-ray transportation when one patient was seen ranged from $10.00 to $186.39.

The table below shows the five lowest and five highest transportation allowed amounts in our sample when a single patient was seen at a nursing home:

Lowest Transportation Allowed Amounts--R0070		Highest Transportation Allowed Amounts--R0070	
Illinois:	$10.00	Michigan:	$186.39
New York:	$33.20	New Jersey:	$154.00
Florida:	$45.44	New York:	$154.00
Ohio:	$50.00	Connecticut:	$126.77
California:	$55.43	Washington:	$113.42

Although Medicare requires carriers to prorate transportation charges when multiple patients are seen at one nursing home, not all carriers do this correctly. For example, two portable suppliers in one State received $123.11 per patient when seeing multiple patients during the same visit.

There is no statutory authority for HCFA to allow setup charges. Prior to 1992, equipment setup was considered part of the transportation component. In 1992, HCFA instructed carriers to start allowing a separate and additional charge for portable x-ray equipment setup. In doing so, HCFA made a distinction between transporting the equipment and setting it up at the patient's bedside.

In contrast to this policy, in November 1996, HCFA eliminated reimbursement for the transportation of portable EKG equipment. In doing so, HCFA stated, "in our judgment, statutory authority existed for separate payments for only the transportation of x-ray equipment." While HCFA states that it believes that Congress intended for it to pay separately for portable x-ray transportation, there is no indication that this also applies to setup charges.

RECOMMENDATION

Legislative Update

After we released our draft report, President Clinton signed into law the Balanced Budget Act of 1997. Among the provisions in this law, it:

- *establishes a prospective payment system for beneficiaries in Part A-covered stays in skilled nursing facilities, to be phased in over several years;*
- *requires that all Part B items and services furnished to residents of nursing homes (not covered under Part A) be billed by the nursing homes as part of a consolidated billing system;*
- *limits reimbursement for services paid under consolidated billing to the Part B fee schedule; and*
- *requires HCPCS codes for services provided to skilled nursing facility patients that are billed to fiscal intermediaries.*

The Balanced Budget Act legislated most of the recommendations in the draft of this report. In the draft report, we recommended that HCFA:

- *instruct fiscal intermediaries to never pay more than the fee schedule amount for portable imaging services billed under arrangement;*
- *require fiscal intermediary edits and Common Procedure Coding System codes on all claims to discontinue payments for non-covered services;*
- *require fiscal intermediaries to disallow any skilled nursing facility overhead associated with portable imaging services; and*
- *convert transportation reimbursement rates to a national fee schedule, rebundle equipment setup with transportation, and remind carriers that they must prorate transportation charges when multiple patients are seen at the same facility.*

Projected Medicare savings from implemented recommendations		
Option	1-year savings	5-year savings
Limit payment for services billed under arrangement to fee schedule	$ 28.3 million	$160.4 million
Limit transportation to $70 per beneficiary-service day (the national median), $35 if 2 beneficiaries are seen during the same trip, etc.	$ 21.8 million	$126.6 million
Stop paying for setup	$ 15.7 million	$ 73.9 million
TOTALS	**$ 65.8 million**	**$360.9 million**

AGENCY COMMENTS AND REVISED RECOMMENDATION

The HCFA concurred with the majority of the recommendations in our draft report but did not concur with our recommendations that it (1) disallow any skilled nursing facility overhead associated with portable imaging services and (2) rebundle the equipment setup charge with transportation. The full text of HCFA's comments appears in appendix A.

We believe that implementation of the Balance Budget Act will address these issues. We are concerned, however, that the cost of ancillary services has been inflated by the practices described in this report. Therefore, we recommend that HCFA:

- ***take into account the inflated payments that have been made for portable imaging services when it implements the prospective payment and Part B provisions of the Balanced Budget Act, seeking legislative authority if necessary.***

  The HCFA should take into account the inflated charges for (1) services billed under arrangement (including payments for services that were non-covered) and (2) transportation charges that were excessive or prorated incorrectly. This recommendation should be considered in tandem with our recommendation in the report "Portable Imaging Services: Nursing Home Perspectives." That report recommends that, in implementing the Balanced Budget Act, HCFA should take into account the unnecessary payments that have been made because HCFA has not enforced the requirement that physicians justify the need for portable services.

APPENDIX A

AGENCY COMMENTS

Health Care Financing Administration

DEPARTMENT OF HEALTH & HUMAN SERVICES

Health Care Financing Administration

The Administrator
Washington, D.C. 20201

AUG 4

DATE: JUL 24 1997

TO: June Gibbs Brown
Inspector General

FROM: Bruce C. Vladeck
Administrator

SUBJECT: Office of Inspector General (OIG) Draft Reports: "Portable Imaging Services: A Costly Option" (OEI-09-95-00090), and "Portable Imaging Services: Nursing Facility Perspectives," (OEI-09-95-00091)

We reviewed the above-referenced reports identifying a number of problems with how nursing facilities provide and bill for imaging services for their patients.

Our detailed comments on the recommendations are attached for your consideration. Thank you for the opportunity to review and comment on these reports.

Attachment

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Comments of the Health Care Financing Administration (HCFA)
on Office of Inspector General (OIG) Draft Reports:
"Portable Imaging Services: A Costly Option" (OEI-09-95-00090), and
"Portable Imaging Services: Nursing Facility Perspectives," (OEI-09-95-00091)

General Comments

The Inspector General should be aware of legislation proposed by the President in his fiscal year (FY) 1998 budget that would mitigate problems with ancillary billing that are experienced under current law.

First, the President proposed to implement a prospective payment system (PPS) for skilled nursing facilities (SNFs) effective July 1, 1998. Prospective payments would cover all SNF service costs, including routine service costs, ancillary costs (whether provided under Part A or Part B of Medicare), and capital-related costs. A PPS would eliminate cost-based discrepancies between "direct" billing and "under arrangement" billing.

Second, the President's consolidated billing proposal is designed to address the current law's lack of restraints on ancillary billing. Under the proposal, SNFs would be required to bill Medicare for all services (except the services of physicians, certified nurse midwives, psychologists, hospice care, and nurse anesthetists). This proposal would prohibit payment to any entity other than the SNF for services or supplies furnished to Medicare-covered SNF patients.

Finally, as recommended by OIG, the President's FY 1998 budget legislation would require SNFs to include HCFA common procedure coding system (HCPCS) codes on their bills.

OIG Draft Report - OEI-09-95-00090 - Portable Imaging Services: A Costly Option

OIG Recommendation

HCFA should instruct fiscal intermediaries (FIs) to never pay more than the fee schedule amount for portable imaging services billed under arrangement.

HCFA Response

We concur. However, we note it will take a considerable amount of administrative work to implement this policy. (For example, it is currently impossible to impose this requirement because SNFs use revenue codes rather than HCPCS codes when billing for these services. It is impossible to compare services using these codes. It will take time to make the changes necessary to require SNFs to use HCPCS codes.) HCFA already instructed the FIs, that in applying the prudent buyer principle, they should compare the price paid by SNFs for portable x-ray services with the amount paid when portable x-ray services are billed by the supplier to the carrier.

OIG Recommendation

HCFA should require FI edits and HCPCS codes on all claims to discontinue payments for non-covered services.

HCFA Response

We concur with the intent of the recommendation. HCFA is currently pursuing legislation that will change SNF payment methodology and make this action unnecessary. We believe implementation of consolidated billing and an amendment to the current statute is a broader approach to resolving issues surrounding non-covered services and excessive costs associated with SNFs billing for portable imaging services. In the interim, HCFA explored use of HCPCS codes. However, this would require a major change to the Medicare Uniform Institutional Provider Billing Form (UB-92) and costly claims processing systems changes. Therefore, it is not cost effective over the longer term.

OIG Recommendation

HCFA should require FIs to disallow any nursing facility overhead associated with portable imaging services.

HCFA Response

We do not concur. Portable x-ray costs incurred by the SNF under arrangement are subject to the test of reasonableness as required by regulations at 42 CFR 413.9, Costs Related to Patient Care, and Chapter 21, Costs Related to Patient Care, of the Provider Reimbursement Manual (PRM). As pointed out in PRM section 2103B, Prudent Buyer-Application of Prudent Buyer Principle, intermediaries may employ various means for

detecting and investigating situations where costs appear to be excessive. Included may be such techniques as comparing the prices paid by providers to the price paid by others. HCFA instructed the FIs, that in applying the prudent buyer principle, they should compare the price paid by SNFs for portable x-ray services with the amount paid when portable x-ray services are billed by the supplier to the carrier. After allowing any reasonable amount of actual overhead that may be applied to the cost incurred by the SNF for the technical component and transportation component of the portable x-ray charge made by the carrier to the SNF, that amount should be compared with the amount paid when portable x-ray services are billed by the supplier to the carrier (excluding the professional fee portion).

OIG Recommendation

HCFA should immediately convert transportation reimbursement rates to a national fee schedule, rebundle equipment setup with transportation, and remind carriers that they must prorate transportation charges when multiple patients are seen at the same facility.

HCFA Response

We partially concur. We will soon publish a proposed rule for the 1998 Medicare physician fee schedule. Among the proposals will be one addressing an adjustment of practice expense relative values assigned to codes payable under the physician fee schedule. As a part of that proposal, we plan to include a national payment rate for the portable x-ray transportation codes R0070 - one patient and R0075 - multiple patients, effective with the 1998 physician fee schedule.

We made a policy decision that it was appropriate to pay a setup fee with every portable x-ray procedure furnished because there was no question that Medicare had historically paid higher amounts for the technical component of x-ray services furnished by portable suppliers vis-a-vis procedures performed by stationary entities. The setup fee reflects the historic national average difference between carrier payments for x-rays furnished by portable suppliers vis-a-vis payments made for the procedures furnished by other facilities. We continue to believe these payments are appropriate. Further, it would be inappropriate to bundle setup fees with transportation payments since carriers pay a single transportation payment per trip, but would pay multiple setup fees when an individual beneficiary receives several x-ray procedures during a session.

Separate codes, describing situations in which one patient is seen and those in which multiple patients are seen, clearly indicate that carriers should have different payment amounts. Further, a discussion of the required proration when multiple patients are seen was included in a Medicare Carriers Manual revision published in June 1996, transmittal number 1546, citation section 15022.G.3.

OIG Draft Report OEI-09-95-00091 - Portable Imaging Services: Nursing Facility Perspectives

OIG Recommendation

HCFA should eliminate the requirement that physicians justify the use of portable x-ray services for nursing facility patients.

HCFA Response

We do not concur. We believe the current requirement in 42 CFR 486.106(a) should be maintained, even though it may not be enforced effectively at this time. We recently proposed and adopted a new rule requiring that the physician who orders a diagnostic test must be a physician who is responsible for some aspect of the beneficiary's care. One of the primary reasons we took this action was to give the carriers an additional tool to use in determining whether diagnostic tests performed in nursing facilities are medically necessary. We believe any action taken the following year to relax the ordering requirements for a category of diagnostic tests that is usually done in nursing facilities would be poorly timed. Further, we believe, since x-ray procedures furnished on a portable basis are more expensive, more extensive justification of the necessity for the procedure is reasonable. Finally, since relaxing the ordering criteria could not possibly save the program any money, we can not see any benefit arising from making such a change.

Furthermore, section 483.75(k) of The Requirements for Long-Term Care Facilities requires a SNF to provide or obtain radiology and other diagnostic services to meet the needs of its residents. In so doing, the facility must assist the resident in making transportation arrangements to and from the source of services, if the resident needs assistance. As stated in your report, 88 percent of the facilities in your sample note that beneficiaries routinely travel to medical appointments outside the facility by taking wheelchair vans, and 38 percent of the facilities note that family members sometimes

take patients to medical appointments outside the facility. This would indicate the use of more costly portable x-ray services performed in the SNF may not always be reasonable and necessary in those instances where the use of available outside resources is feasible.

There is no requirement that an aide be sent with a resident when obtaining services outside the facility. We recognize in some instances an aide may be necessary to ensure the safety of the resident. In those cases, the SNF may charge the resident for this service. Furthermore, under Title 3, Part B, section 321(a) of the Older Americans Act, grants are provided to state units on aging to provide supportive services, including transportation (i.e., wheelchair vans), that are utilized by all long-term care (LTC) facility residents in order to attend medical appointments outside the facility. These services are provided at no cost to the facility. Also, under the Medicaid program, nursing facilities (NFs) are reimbursed for transportation charges as part of the daily rate.

OIG Recommendation

HCFA should remind NFs that suppliers should not have access to patient records.

HCFA Response

We concur. HCFA is preparing to release a program memorandum that addresses medical necessity and confidentiality of medical records for all services provided in LTC facilities.

Technical Comments

The term nursing facility utilized throughout this report is misleading. Current Federal regulations distinguish between two types of LTC facilities: an NF under the Medicaid program, and a SNF under the Medicare program. We suggest that the term "long-term care facility" replace the words "nursing facility" throughout this report when referring to a generic nursing home. If a policy or concern specifically relates to Medicare SNFs or Medicaid NFs, it should be so noted.

The definition of SNF coverage under Part A that appears in the "Background" is too general. We suggest it be more specific. Section 1861(h) of the Social Security Act provides for coverage of extended care services furnished to an inpatient of a SNF. Such coverage includes: (1) nursing care provided by, or under the supervision of a registered professional nurse; (2) bed and board in connection with the furnishing of such nursing

care; (3) physical or occupational therapy or speech-language pathology services furnished by the SNF or others under arrangements with them made by the facility; (4) medical social services; (5) such drugs, biologicals, supplies, appliances, and equipment furnished for use in the SNF, as are ordinarily furnished by such facility for care and treatment of inpatients; (6) medical services provided by an intern or resident-in-training of a hospital with which the facility has in effect a transfer agreement, under an approved teaching program of such hospital, and other diagnostic, or therapeutic services provided by a hospital with which the facility has such an agreement in effect; and (7) such other services necessary to the health of the patients as are generally provided by SNFs. Additionally, the definition of the SNF benefit that appears in the "Background" is too general. We suggest it be more specific. The SNF benefit is referred to as post-hospital extended care services. It is designed to assist persons who have had a 3-day qualifying hospital stay, and require skilled services on a daily basis to recuperate from an acute episode. Coverage, if approved, is limited to a total of 100 days per benefit period. On the 21st day the beneficiary becomes responsible for a daily coinsurance amount equal to one-eighth of the inpatient hospital deductible, as prescribed by law.

A statement is made on page 3 of the "Introduction" that "Nursing facilities may bill under arrangement even for patients who are not in Part A-covered stays. In these cases, the nursing facility submits an outpatient claim to the fiscal intermediary." Although the first sentence is technically correct, the second sentence is incorrect and needs clarification. We suggest the following language: "Payment may be made for a limited range of services under Part B when furnished by a participating SNF to an inpatient of the SNF, if payment cannot be made under Part A, e.g., the beneficiary exhausted his allowed days of inpatient SNF coverage under Part A in his current spell of illness. In these cases, the SNF submits a claim to the FIs for those inpatient services rendered."

APPENDIX B

CONFIDENCE INTERVALS FOR SELECTED STATISTICS

The following tables show the point estimates and 95 percent confidence intervals for selected statistics in the order they appear in the report.

Statistic		
	Point estimate	**95 percent confidence interval**
Amount that Medicare paid during 1994 for portable chest x-rays and EKGs billed under arrangement		
	$24.4 million	$6.2 million - $42.6 million
Amount that Medicare would have paid during 1994 for portable chest x-rays and EKGs billed under arrangement if these services had been billed directly to the Medicare carrier		
	$9.7 million	$3.0 million - $16.4 million
Percent of portable chest x-rays that were billed under arrangement during 1994		
	10.2 percent	3.8 percent - 16.5 percent
Difference between (1) the amount that portable suppliers were paid during 1994 for portable chest x-rays and EKGs billed under arrangement and (2) the amount that suppliers would have received if these services had been billed directly to the Medicare carrier		
	$10.7 million	$2.9 million - $18.5 million
Difference between (1) the amount that skilled nursing facilities were allowed during 1994 for portable chest x-rays and EKGs billed under arrangement and (2) the amount that skilled nursing facilities paid suppliers for these services		
	$8.1 million	$0.5 million - $15.7 million
Beneficiaries' copayments during 1994 for chest x-rays and EKGs billed under arrangement		
	$6.5 million	$1.3 million - $11.8 million
Beneficiaries' copayments during 1994 for chest x-rays and EKGs billed under arrangement if these services had been billed directly to the Medicare carrier		
	$2.4 million	$0.8 million - $4.1 million

Statistic		
	Point estimate	**95 percent confidence interval**
Amount that Medicare would have saved during 1994 if HCFA had required fiscal intermediaries to apply the fee schedule to all portable imaging services billed under arrangement		
	$23.6 million	Cannot calculate because only chest x-rays and EKGs were part of our sample
Amount that Medicare would have saved during 1994 if HCFA had required fiscal intermediaries to apply the fee schedule to chest x-rays and EKGs billed under arrangement		
	$14.7 million	$3.0 million - $26.4 million
Amount that Medicare would have saved during 1995 if HCFA had eliminated payment for setup charge		
	$16.6 million	$16.2 million - $17.0 million
Amount that Medicare would have saved during 1995 if HCFA had limited the amount allowed for portable x-ray transportation to $70 per beneficiary per service day		
	$18.9 million	$18.0 million - $19.8 million

APPENDIX C

CALCULATION OF ESTIMATED SAVINGS TO THE MEDICARE PROGRAM

The calculation of estimated savings involved (1) estimating the amount that Medicare would have saved during 1994 if HCFA had required the fiscal intermediaries to apply the fee schedule to all portable imaging services billed under arrangement, and (2) projecting these savings, and the other savings in our recommendations, to a 5-year period from 1997 through 2001.

Portable imaging services billed under arrangement

We calculated this estimate through a three-step process, as described below. We cannot calculate a confidence interval for this estimate, because only chest x-rays and EKGs were part of our sample.

1. Using a 1 percent sample of 1994 part B claims, we calculated the amounts that Medicare allowed to suppliers for portable EKGs and x-rays that were billed directly to the Medicare carrier, as shown in the table below.

Service (billed directly to carrier)	1994 allowed amount
Portable EKGs	$15,643,243
Portable chest x-rays	$78,249,734
SUB-TOTAL EKGs and chest x-rays	$93,892,977
Portable, non-chest x-rays	$56,424,623
TOTAL	$150,317,600

As illustrated below, the ratio of non-chest x-rays to the combination of chest x-rays and EKGs is 0.601. We assumed that this ratio would be approximately the same for services billed under arrangement as for services billed directly.

Calculation: Ratio of non-chest x-rays to combination of EKGs and chest x-rays	$56,424,623 ÷ $93,892,977 = 0.601

2. From our sample of chest x-rays and EKGs, we estimated that portable chest x-rays and EKGs billed under arrangement during 1994 cost Medicare $14.7 million more than these services would have cost if billed directly. (See the body of this report, page 9).

3. As illustrated below, we multiplied the estimate from step 2 by the ratio from step 1.

Calculation: Non-chest x-rays billed under arrangement during 1994 cost Medicare $9 million more than if billed directly	$14,731,933 * 0.601 = $8.85 million

4. By adding the amounts from steps 2 and 3, we estimated that all portable services that were billed under arrangement during 1994 cost Medicare $23.6 more than if billed directly.

Estimated savings for 1997 through 2001: transportation and setup

We used a three-step process to estimate how much Medicare will save from 1997 through 2001 if HCFA (1) eliminates payment for setup and (2) limits the allowance for portable x-ray transportation to $70 per beneficiary per service day.

1. Using 1 percent sample data for 1994, we calculated that Medicare allowed a median of $70 for HCPCS code R0070 (portable x-ray transportation--one patient).

2. Using 1 percent sample data for each year from 1992 through 1995, we calculated how much Medicare would have saved if HCFA had eliminated payment for setup and limited the allowance for transportation to $70. (We included portable x-ray transportation, but not EKG transportation, in this calculation.) Next, we calculated the annual percent changes for each year. We selected the smallest of these annual percent changes (a 2.90 percent decrease for setup and a 7.43 percent increase for transportation) to use in the step 3 calculations.

3. Starting with the 1995 estimated savings, we calculated the savings in each subsequent year by changing the previous year's savings by a 2.90 percent decrease (for setup) or a 7.43 percent increase (for transportation). The results of these calculations are displayed on the following page.

For example, the table on the following page illustrates how we calculated the 1997 savings for limiting the transportation allowance.

Starting point: 1995 transport savings	$18,908,522
Smallest percent increase in transport savings, 1992 through 1995	7.43 percent
1996 transport savings calculation	$18,908,522 * 1.0743 = $20,313,807
1997 transport savings calculation	$20,313,807 * 1.0743 = $21,823,533

The precise number used for these calculations was 1.0743201987.

Statistics from 1 percent sample data				
Year	Savings for limiting transportation allowance	Percent change from previous year	Savings for eliminating setup allowance	Percent change from previous year
1992	$14,446,335	Not applicable	$10,757,229	Not applicable
1993	$15,892,584	10.01%	$17,013,946	58.16%
1994	$17,073,724	7.43%	$17,118,274	0.61%
1995	$18,908,522	10.75%	$16,621,992	-2.90%
1996	Data for 1996 were not available at the time of this report			

5-year savings estimates		
Year	Estimated savings for limiting transportation allowance	Estimated savings for eliminating setup allowance
1997	$21,823,533	$15,672,175
1998	$23,445,463	$15,217,817
1999	$25,187,934	$14,776,632
2000	$27,059,906	$14,348,237
2001	$29,071,004	$13,932,262
TOTAL	$126,587,840	$73,947,123

Estimated savings for 1997 through 2001: services billed under arrangement

We used a three-step process to estimate how much Medicare will save from 1997 through 2001 if HCFA requires fiscal intermediaries to apply the fee schedule to all portable imaging services billed under arrangement.

1. Using 1 percent sample data for each year from 1992 through 1995, we calculated the total number of portable transportation claims billed directly to Medicare carriers. Next, we calculated the annual percent changes for each year. We selected the smallest of these annual percent changes (a 6.27 percent increase) to use in the step 3 calculations.

   We indexed the billed-under-arrangement savings to directly billed transportation claims, because our sample only included 1994 data for services billed under arrangement. In these estimates, we are assuming that the number of portable services billed under arrangement will increase at the same rate as the number of portable services billed directly.

2. We estimated that Medicare would have saved $23.6 million during 1994 if HCFA had required the fiscal intermediaries to apply the fee schedule to all portable imaging services billed under arrangement. (See pages C-1 and C-2 of this appendix for this calculation.)

3. Starting with the 1994 estimated savings from step 2, we calculated the savings in each subsequent year by increasing the previous year's savings by 6.27 percent. The results of these calculations are displayed on the following page.

For example, the table below illustrates how we calculated the 1997 savings for applying the fee schedule to services billed under arrangement.

Starting point: 1994 savings for services billed under arrangement	$23,585,031
Smallest percent increase in portable transportation claims, 1992 through 1995	6.27 percent
1995 savings calculation	$23,585,031 * 1.0627 = $25,063,260
1996 savings calculation	$25,063,260 * 1.0627 = $26,634,140
1997 savings calculation	$26,634,140 * 1.0627 = $28,303,476

The precise number used for these calculations was 1.06267658.

Statistics from 1 percent sample data		
Year	Number of directly billed portable transportation claims	Percent change from previous year
1992	1,345,000	Not applicable
1993	1,429,300	6.27%
1994	1,531,800	7.17%
1995	1,633,200	6.62%
1996	Data for 1996 were not available at the time of this report	

5-year savings estimates	
Year	Estimated savings for applying fee schedule to services billed under arrangement
1997	$28,303,476
1998	$30,077,441
1999	$31,962,593
2000	$33,965,899
2001	$36,094,765
TOTAL	$160,404,174