

Department of Health and Human Services

OFFICE OF
INSPECTOR GENERAL

POCKET DOPPLERS

MANAGEMENT ADVISORY REPORT



Richard P. Kusserow
INSPECTOR GENERAL

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OFFICE OF INSPECTOR GENERAL

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PURPOSE

This report quantifies Medicare reimbursement for in-office ultrasound tests of arteries and veins conducted with inexpensive screening devices, popularly known as "Pocket Dopplers." This report is being provided for informational purposes only to advise the Health Care Financing Administration (HCFA) of potential savings resulting from its recent decision to prohibit reimbursement for Pocket Dopplers.

BACKGROUND

Pocket Dopplers are unsophisticated screening devices used by many medical practitioners to perform ultrasound tests of arteries and veins. A hand-held device, often shaped like a ballpoint pen, the typical Pocket Doppler operates on a 9-volt battery. When activated, the instrument transmits a high frequency soundwave into the tissues. Analog waveform sounds (comparable to a stethoscope), reflected from internal organs or the flow of blood, change in frequency by an amount proportional to blood flow velocity. The reflected sound results in an audible signal. Typically, the Pocket Doppler is nondirectional (i.e., it is incapable of determining the direction of blood flow) and produces audio signals only. Such tests can be conducted in less than 5 minutes. These devices are marketed as diagnostic ultrasound equipment and generally cost under \$1,000.

Approximately 15 manufacturers produce and market Pocket Dopplers. Industry sources estimate that at least 100,000 units are in active use in the medical community. About 20,000 new units were sold in 1990.

Diagnostic ultrasound tests are usually conducted using "mid-level" equipment. This equipment costs from \$15,000 to \$60,000 and offers a wide range of sophisticated options, such as two-dimensional displays, computerized analysis, and color-flow imaging. More sophisticated devices produce video pictures of blood flow velocities in combinations of red, blue, and green. Changes in the intensity of color and blood flow velocity can indicate an irregularity, such as a blockage.

Nationally, Medicare in-office allowances for four major procedure codes used in diagnostic vascular ultrasound tests surpassed \$88 million in 1989, an increase of more than 31 percent over 1988. These tests reflect an increased frequency in allowed services of approximately 25 percent for this 1-year period.

Our previous draft report (Low-Cost Ultrasound Equipment, OEI-03-88-01401) reviewed the appropriateness of Medicare reimbursement-for diagnostic tests conducted with such inexpensive screening devices. As a result of this study, we recommended that HCFA prohibit payment for tests conducted with Pocket Dopplers. The HCFA concurred with this recommendation. However, accurate information regarding potential savings was not available.

METHODOLOGY

This report is based on a two-stage random sample consisting of 480 services from 8 Medicare carriers. We selected 60 services per carrier from 1988 Part B Medicare Annual Data (BMAD) billings for in-office diagnostic vascular tests. We limited the services to four commonly used procedure codes by practitioners of these tests. The codes are: 93910 (noninvasive studies of lower extremity arteries); 93950 (noninvasive studies of lower extremity veins); 93860 (noninvasive studies of carotid arteries); and 93890 (noninvasive studies of upper extremity arteries). These procedure codes represent only a portion of the number of codes for which Pocket Doppler services could be billed.

After receiving identifying information from the carriers, we wrote to the practitioners requesting detailed data on the types of equipment used to conduct the tests. We reviewed the responses against pertinent information from scientific publications, manufacturers' catalogs, and related technical materials to determine if Pocket Dopplers were used to conduct the tests. We consulted with a Registered Vascular Technologist who reviewed responses and assisted us in making determinations.

FINDINGS

- ▶ Pocket Dopplers accounted for 7 percent of frequently performed in-office ultrasound services in 1988.

Sixty-five percent of the providers in our sample (314 of 480) responded to our letters. Based on our analysis, 7 percent of the services (22 responses) were performed with Pocket Dopplers. Medicare allowed \$1,600 for these 22 services.

The number of allowed services for the four procedure codes in our sample totaled 561,800 in 1988. Applying the 7 percent usage rate and the 65 percent response rate, we calculate Pocket Dopplers were used for approximately 25,000 services in 1988.

If non-respondent usage rates were the same as respondent rates, total services conducted by Pocket Dopplers could have been as high as 39,000 in 1988.

- ▶ Medicare allowed between \$2 and \$2.9 million for Pocket Doppler services in 1988.

The average Medicare allowance for Pocket Doppler services in 1988 was \$73.00. Based on our projection, we estimate that Medicare allowed \$2 million for Pocket Doppler services in 1988. If non-respondents and respondents had the same usage rate, an additional \$900,000 could have been allowed for 1988.

- ▶ By prohibiting payment for Pocket Doppler services, we estimate savings of \$30 million in Medicare allowances will be realized over a 5-year period.

The HCFA has agreed to prohibit separate coverage for Pocket Doppler services. We assume this coverage decision will be effective by 1992.

Our savings calculations are very conservative. In our calculations, we applied the 65 percent response rate and the 7 percent Pocket Doppler usage rate to the 700,700 allowed services for the four procedure codes in 1989. Non-respondents were not included in our calculations even though there is no reason to suspect the usage rate for non-respondents differs from respondents. We assumed an annual 20 percent increase in the number of services -- the actual annual increase from 1987 to 1989 was between 25 and 30 percent. The 1988 average allowed amount of \$73 per service was used in all 5 years. We omitted possible reimbursement increases because of recent legislative changes designed to minimize such increases.

As shown in the chart below, we estimate that savings of \$30 million in Medicare allowances will be realized over the next 5 years.

**PROJECTED MEDICARE ALLOWANCES
FOR POCKET DOPPLERS 1992-1996**

	1992	1993	1994	1995	1996
TOTAL SERVICES	1,210,810	1,452,972	1,743,566	2,092,279	2,510,735
POCKET DOPPLER SERV.	55,092	66,110	79,332	95,199	114,238
MEDICARE ALLOWANCES	\$4,021,716	\$4,826,030	\$5,791,236	\$6,949,527	\$8,339,374

TOTAL MEDICARE ALLOWANCES - \$29,927,883