Audiology Direct Access: A Cost Savings Analysis

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Escalating health care costs have led third parties to seek practitioners who can deliver quality health care in a cost-effective manner. In response, several studies were designed to assess the cost-effectiveness of providing patients with hearing disorders direct access to audiologists (Hall, Freeman, and Bratt, 1994; Bratt, Freeman, Hall and Windmill, 1996; Freeman, 1999; Yaremchuk, Schmidt, and Dickson, 1990). These studies suggested that providing patients with direct access would reduce costs without compromising the quality of patient care. Therefore, government and other third parties such as the Department of Veteran's Affairs and the Federal Employee Health Benefits Programs now provide beneficiaries direct-access to audiologic care.

Bratt et al. (1996) described three models of entry and delivery of hearing care services in the United States with regard to their effectiveness, efficiency, and viability In the first model, patients present to the primary care physician (PCP) with a complaint of hearing problems. The PCP refers to the otolaryngologist who then refers to the audiologist. This is a three-step process where at least 80% of patients did not have a medically/surgically treatable condition. In the second model, the PCP is utilized as the point of entry and the initial PCP referral is made to audiology. Subsequently, 20% of patients with a medical/surgically treatable disorder are identified by the audiologist and are referred for medical management. This model appears to provide significant cost-savings by eliminating a step in the referral process without compromising the quality of care. The third model would provide audiologists direct access to patients. For 80% of patients with direct access, that would be the only step required in the evaluation and management of these patients. Twenty percent (20%) would require a medical/surgical referral. The audiologist has the knowledge and skills necessary to identify these patients and make the appropriate referral.

Again, direct access to audiologists appears to be a cost-effective way of delivering hearing and balance services. However, specific cost-savings have not been presented in the literature.The purpose of this paper is to apply utilization data provided by CMS/HCFA to the models developed by Bratt et al.

Medicare collects and publishes data on the utilization of health care procedures by CPT code (Health Care Financing Administration, 2000). This data summarizes the allowed procedures by CPT code and the practitioner that billed for the services. For example, in 2000, Medicare paid an average of $47.75 to providers billing for a comprehensive audiologic assessment (92557). There were 803,724 comprehensive audiologic assessment (92557) services billed and Medicare allowed a total of $38,377,535 for the services. This paper will apply these data to the models to project the anticipated cost-savings to Medicare if beneficiaries were provided direct access to audiology services.

Methodology

Current procedural terminology (CPT) codes are utilized by providers to describe their clinical procedure and by third-party payers to reimburse the provider. These codes allow healthcare providers to accurately bill for services provided to a patient. As a condition of reimbursement for audiology services, Medicare requires beneficiaries to have a physician referral prior to all reimbursed audiologic services. Physicians have a choice of evaluation and management CPT codes for their office visits prior to making the audiologic referral. The codes range from:

- CPT 99201-99205 Office/outpatient visit, new, levels 1-5
- CPT 99211-99215 Office/outpatient visit, established patient, levels 1-5
- CPT 99241-99245 Office/outpatient consultation, levels 1-5

It is not possible to determine exactly which code was used prior to the audiology referral. Therefore, for the purpose of this paper, it was assumed that one-third of referring physicians used the mid-level 3 code for each group of CPT codes. That is, one-third billed Medicare for 99203, another third billed 99213, and one-third billed 99243.

In addition, while audiologists provide many diagnostic services for hearing and balance disorders, it was assumed that all patients would have received a minimum of a pure tone evaluation prior to additional diagnostic tests. Therefore, for the purpose of this paper, the CPT codes 92552 (air conduction threshold), 92553 (air and bone conduction threshold), and 92557 (comprehensive evaluation) were used to project the cost-savings for medical referrals for hearing evaluations. The authors recognize that this is a conservative approach to projecting financial cost-savings and could potentially underestimate the savings to Medicare.

Results

In 2000, Medicare paid healthcare providers an estimated $41.5m for 950,931 variations of pure-tone tests (92552,92553,92557) as noted in Table 1. Medicare requires a physician evaluation and referral prior to authorizing payment for these audiologic services. Assuming Level 3 physician outpatient visits, Table 2 presents projected physician office visit payments associated with the audiologic referrals. Assuming that Medicare was billed 99203 Level 3 New Outpatient Visit for one-third of the patients referred for audiologic pure-tone tests, then physicians were compensated an average approved payment of $94 and an aggregate $29.8m in 2000. Similarly, an estimated 316,977 patients were seen by their referring physician for a Level 3 Outpatient Consultation (99243) and Medicare paid an average $118 per patient or an aggregate of $37.4m in 2000. According to the Medicare data, they allowed approximately $84m to referring physicians for patients with a complaint of hearing loss in 2000.

TABLE 1
Medicare Allowed Audiology Services

CPT Code	Allowed Services	Allowed Payment
92552	87,033	$ 1,543,753
92553	60,174	$ 1,593,318
92557	803,724	$38,377,535
Total	950,931	$41,514,606

Discussion:

The purpose of this paper is to provide estimated cost-savings to Medicare for direct access to audiology services. The projections are based on Medicare published data on allowed payments for physician services and audiologic test procedures. These values can then be applied to the models of entry described by Bratt et al (1996) to demonstrate the significant cost-savings to Medicare if audiologists are provided direct access to patients with complaints of hearing loss.

TABLE 2
Level 3 Evaluation and Management Allowed Services

CPT Code	Approved Payment	# Referred Physician	Paid by Medicare
99203	$94	316,977	$29.8m
99213	$53	316,977	$16.8m
99243	$118	316,977	$37.4m
TOTAL		950,931	$84.0m

Model 1

Before the rise in specialties and subspecialties in medicine, healthcare was provided as a format depicted in this model. Patients with complaints of hearing loss first visited their primary care physicians who were paid a total of $84m by Medicare for these offices visits. The PCPs then refereed the patients to the otolaryngologist (ENT) who were paid by Medicare an additional $84m. The ENTs then refereed these patients to an audiologist for hearing evaluations. In 2000, Medicare paid $41m for basic hearing evaluations, not inclusive of the full scope of diagnostic hearing and balance services. According to Bratt et al., an estimated 20% of patients have a medical or surgical condition requiring return to a physician for an additional office visit. For the purpose of this paper, it is estimated that physicians bill these follow-up services as CPT 99213, Level 3 at $53. Therefore, it is estimated that Medicare paid these physicians a total of $10.08m for the 190,186 (20%) of audiology patients requiring a physician follow-up evaluation. The total cost of Model 1 is $219.58m (See Table 3).

TABLE 3
Total Cost for Model 1

PCP	ENT	Audiology	20% Return	Total Annually
$84m	$84m	$41.5m	$10.08m	$219.58m

Model 2

This model is a modification of Model 1 for hearing healthcare delivery. In this model, the PCP is the entry level with referrals directly to audiology for patients with a complaint of hearing loss. Again, as in Model 1, 20 percent (20%) of the patients will have a condition that is medically/surgically treatable and the audiologist will have the knowledge and skills to make the appropriate medical referral (see Table 4). Medicare paid physicians approximately $84m in 2000 for their office visits for patients complaining of hearing loss. Audiologists were paid 41.5m for hearing evaluations and $10.08m was paid to physicians for the 20% of patients that required a medical follow-up evaluation. A total of $135.58m would have been paid by Medicare in this model. This is an annual savings of $84m from Model 1.

TABLE 4
Total Cost for Model 2

Medical	Audiology	20% Return	Total Annually
$84m	$41.5m	$10.08m	$135.58m

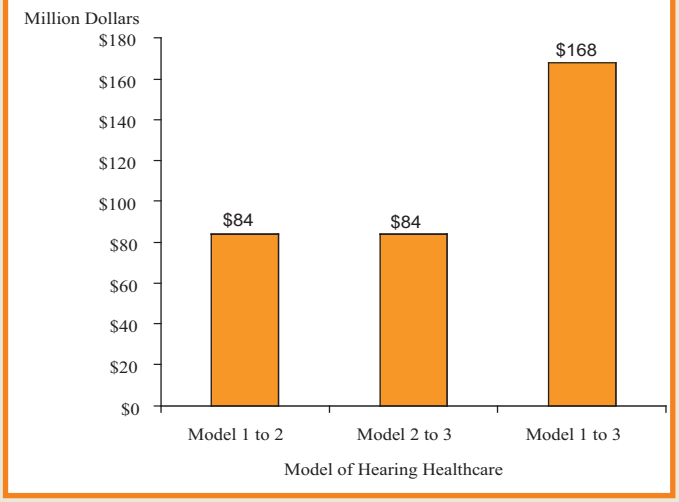
Model 3

This model permits patients with a complaint of hearing loss direct access to audiologists. The audiologist assumes the responsibility for identifying those patients that have a condition that is medically/surgically treatable and making the appropriate physician referral (see Table 5). In this model, audiologists are paid the $41.5m for the hearing evaluations and physicians are paid $10.08m by Medicare for those patients with medically/surgically correctable disorders. A total of $51.58m is paid by Medicare in Model 3 which is a $168m annual savings from Model 1 and an $84m annual savings from Model 2 (Figure 1).

TABLE 5
Total Cost for Model 3

Audiology	20% Return	Total Annually
$41.5m	$10.08m	$51.58m

FIGURE 1
Projected Annual Medicare Savings



Conclusion:

Permitting patients with a complaint of hearing loss direct access to audiologists will result in a significant cost-savings to Medicare and will not compromise the quality of patient care. The current system of requiring patients to have a medical referral prior to an audiologic evaluation appears to be a significant financial drain on the health care system. The unnecessary expenses for medical over-referrals can be controlled if Medicare follows the policies adopted by other federal health plans who also found significant cost-savings in direct access to audiology services.

References

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