

# Determining Potential Medicare Savings by Streamlining Beneficiary Access to Audiology Services

*Projected Impact of Direct Access for Audiologists*

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# Determining Potential Medicare Savings by Streamlining Beneficiary Access to Audiology Services

*Projected Impact of Direct Access for Audiologists*

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# Executive Summary

## Methods in Brief

Hearing loss is one of the most common conditions affecting seniors. One in three people over 60 years of age, and one in two people over 85 years of age, report hearing loss.<sup>1</sup> If untreated, the overall quality of life for patients with hearing loss is reduced. Hearing loss is associated with other chronic physical, cognitive, and affective conditions. Vestibular disorders are also a relatively common condition, with approximately 13 million<sup>2</sup> (or about 30 percent of)<sup>3</sup> Americans over the age of 65 suffering from some type of dizziness or balance problem that significantly interferes with their lives. Patients with vestibular dysfunction who reported dizziness have a 12-fold increase in the odds of falling, which can lead to hospitalization.<sup>4</sup>

The management of hearing loss generally involves primary care physicians, otolaryngologists, and audiologists. Audiologists specialize in the diagnosis and non-medical management of hearing loss and balance disorders, while otolaryngologists specialize in diagnosis and medical treatment of diseases of the ear, nose, and/or throat. It is estimated that approximately five to 10 percent of Medicare beneficiaries are affected by disorders that require medical treatment, often provided by an otolaryngologist.<sup>5</sup> However, in order for Medicare beneficiaries to receive care from an audiologist as a covered service under current Medicare legislation and regulation, the beneficiary must first obtain a physician referral.<sup>6</sup>

The requirement for the physician referral can result in complicated patient pathways, as well as additional spending for both the Medicare program and beneficiaries through copayments. Furthermore, the burden of the referral process causes some patients to become discouraged and then not receive the needed diagnostic services, leaving their conditions untreated.<sup>7</sup>

Dobson DaVanzo & Associates, LLC (Dobson | DaVanzo) was commissioned by the American Academy of Audiology to determine whether allowing beneficiaries to directly access audiologists for all of the services allowed within audiology's scope of practice would result in savings to the Medicare program. Medicare savings for implementing direct access are projected over 10 years (2013-2022).

<sup>1</sup> National Institute on Deafness and Other Communication Disorders. hearing loss and older adults. Accessed online at: <http://www.nidcd.nih.gov/health/hearing/pages/older.aspx>

<sup>2</sup> Scopelliti AR. Dizziness and falls. Accessed online at: <http://ezinearticles.com/?Dizziness-and-Falls&id=1065264>

<sup>3</sup> Colledge N, Lewis S, et al. (2002). Magnetic resonance brain imaging in people with dizziness: a comparison with non-dizzy people. *J Neurol Neurosurg Psychiatry* 72(5): 587-89.

<sup>4</sup> Squires A, Livesley B. (1993). The future of physiotherapy in older people: demographic, epidemiological, and political influences. *Physiotherapy* 79: 851-57.

<sup>5</sup> Zapala DA, Stamper GC, Shelfer JS. (2010). Safety of audiology direct access for Medicare patients complaining of impaired hearing. *J Am Acad Audiol* 21(6): 365-79.

<sup>6</sup> Centers for Medicare and Medicaid Services (CMS). Medicare Benefit Policy Manual, Chapter 15 – Covered Medical and Other Health Services: 19.

<sup>7</sup> Kochkin S. (2007). MarkeTrak VII: Obstacles to adult non-user adoption of hearing aids. *Hear J* 60(4): 27-43.

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## Methods in Brief

This study consists of qualitative and quantitative activities. The qualitative components of the study include: 1) conducting a literature review of studies estimating the financial and clinical impact of direct access; 2) interviewing key stakeholders about the current practice patterns of audiologists; and 3) on-going communication with a clinical advisory committee to help define patient episodes of care and to ensure that findings from the quantitative analyses are interpreted appropriately.

These qualitative components helped inform three separate quantitative analyses of patient episodes, which were constructed using research-identifiable Medicare claims for a consistent five percent sample of Medicare beneficiaries from 2007 to 2009 across all sites of service.<sup>8</sup> Patient episodes allowed for comparison of patient outcomes and Medicare payments for patients who received audiological services from audiologists to those who did not (or those who received audiological services from other specialties). Patient episodes were compared using rigorous propensity score matching techniques.

Analysis 1 was conducted to demonstrate whether patients who received care from audiologists had equal to or better patient outcomes at a comparable Medicare payment than those who received care from non-audiologists. Medicare policy defines that other eligible providers of these audiology services include: physicians, and non-physician providers, specifically physicians assistants (PAs), nurse practitioners (NPs), clinical nurse specialists (CNSs), clinical psychologists (CPs), and clinical social workers (CSWs), unless the service has a separately billable technical component. This analysis concludes that for acute and chronic hearing loss and vestibular conditions, neither patient care nor patient safety would be compromised under direct access. This finding provided the foundation for Analyses 2 and 3.

Analyses 2 and 3 are used to identify the two sources of potential Medicare savings: 1) a reduction in the duplicative audiology services and unnecessary<sup>9</sup> evaluation and management (E&M) services provided at the point of physician referral (Analysis 2), and 2) reduction in adverse events and negative outcomes associated with untreated patients receiving care under direct access (Analysis 3). Analysis 3 compares Medicare payments and outcomes for patients treated by audiologists to those who are diagnosed with an audiological condition, but who did not receive any care for their condition.

Using the results of Analysis 2 and estimates of potential woodworking of untreated patients analyzed in Analysis 3, we developed a projection model to estimate the 10-year (2013-2022) potential savings to Medicare under direct access. The model is based on the projected Congressional Budget Office (CBO) baseline spending for Medicare for each care setting.

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<sup>8</sup> Data were obtained through a data use agreement with CMS (DUA#21842).

<sup>9</sup> Unnecessary E&M services refer to services that would not occur if the patient was able to see the audiologist directly. "Unnecessary" is not linked to medical necessity; rather the concept focuses on the provision of unneeded services prior to seeking care from an Audiologist. Duplicative services refer to audiological services that are performed by non-audiologists at the time of referral.

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## Summary of Findings

The comparison of patient outcomes and Medicare payments for patients who receive care from audiologists compared to those who received care from other specialists<sup>10</sup> suggests that patients who received care from an audiologist have equal to or better patient outcomes. Therefore, if direct access to audiologists were to be implemented within Medicare policy, patient outcomes would not be jeopardized. The remaining analyses estimate the potential Medicare savings that could be achieved under a direct access policy.

About 40 percent of patient episodes had a traceable physician referral chain in the Medicare claims based on the referring and servicing physician's national provider identifier (NPI). For these episodes only (not imputed to episodes without a referral chain), if Medicare beneficiaries were allowed direct access to audiologists, Medicare could have saved about \$20.9 million in 2009 strictly through eliminating the need for the referral process, which consisted of \$18.6 million in unnecessary E&M services and \$2.4 million in duplicative audiological services. This suggests that Medicare paid 44 percent more for audiological services than the payments made to audiologists (\$47.96 million in 2009).

In addition to savings from duplicative and/or unnecessary E&M services, Medicare would achieve savings from a reduction in adverse events for patients receiving care when they otherwise would not have. Analysis 3 compares patient outcomes and Medicare payments for patient episodes that received care from an audiologist compared to those who did not receive any care for a diagnosed audiological condition. Consistent with the published literature, the study results suggest that lack of treatment for acute and chronic hearing loss does not impact Medicare payments. The literature generally associates untreated hearing loss with quality of life issues and social withdrawal, not health care utilization. Untreated vestibular conditions, however, do impact Medicare payments, as untreated patients are far more likely to experience falls and subsequent hospitalizations due to injury. Therefore, if these patients were to receive care for their vestibular condition, this care would reduce Medicare payments due to reduced negative outcomes such as falls. The remaining condition – dizziness – does not have an impact on payments, but due to the ambiguity of the diagnosis of dizziness, there is little confidence that the dizziness is an audiological issue as opposed to medication interactions, side effects, or other problems.

Direct access to audiologists may cause untreated patients to seek care when they otherwise would not have, referred to as the “woodwork effect.” We assume that 10 percent of untreated acute and chronic hearing loss and vestibular patients would now receive care, and 1 percent of untreated patients with dizziness would receive care under direct access. These increases could result in 63,667 more Medicare beneficiaries receiving care from audiologists, or a 31.9 percent increase. While we do not anticipate woodworking of this magnitude to occur under direct access, these results suggest that even if woodworking were to occur at assumed levels, the current

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<sup>10</sup> In addition to audiologists, Medicare policy defines that other eligible providers of these audiology services include: physicians, and non-physician providers, specifically physicians assistants (PAs), nurse practitioners (NPs), clinical nurse specialists (CNSs), clinical psychologists (CPs), and clinical social workers (CSWs), unless the service has a separately billable technical component.

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supply of audiologists would not have the capacity to handle this influx of patients. Therefore, we believe that more aggressive estimates of a woodwork effect could not be supported by the current capacity of existing inadequate supply of audiologists, which constrains the size of any woodworking effect.

The woodwork cost effect differs for each clinical condition. For example, since untreated acute and chronic hearing loss have no impact on Medicare payments, an increase in utilization for these conditions could cost Medicare approximately \$1.1 million in 2009 due to the additional audiological services that could be provided. However, for vestibular conditions, the increase in utilization could decrease Medicare payments by \$3.4 million, largely due to a reduction in hospitalization and outpatient hospital services associated with negative outcomes of vestibular conditions (e.g., falls). Lastly, an increase in utilization for patients with dizziness could increase Medicare payments by \$2.5 million. Any decrease in hospitalizations due to prevented falls is offset by the increase in audiological services.

## Estimated 10-Year Savings

The results of Analyses 2 and 3 were projected over 10 years (2013-2022) based on CBO projected Medicare spending by site of service. Analyses suggest that direct access to audiologists could produce \$240.4 million in Medicare savings from avoided duplicative and unnecessary services (\$173.3 million), and from decreased hospital and other utilization because treated vestibular patients do not fall with resulting injuries. The net impact of utilization is a savings of \$67.1 million, even though we estimate modest increases of \$11.8 million for treating new acute and chronic hearing loss patients and \$3.8 million for patients with dizziness due to the woodwork effect. The results of the analysis are presented in Exhibit ES-1.

**Exhibit ES-1: 10-Year Projected Cost to Medicare of Direct Access to Audiologists (in millions)**

	<b>Total Medicare Cost (2013-2022)</b>
<b>Unnecessary and Duplicative Services</b>	<b>-\$173.3</b>
Audiological Services (Duplicative)	-\$17.3
E&M Services (Unnecessary)	-\$155.9
<b>Change in Utilization (Including Woodwork Effect)</b>	<b>-\$67.1</b>
Acute and Chronic Hearing Loss	\$11.8
Vestibular Conditions	-\$82.7
Dizziness	\$3.8
<b>Total Cost of Direct Access</b>	<b>-\$240.4</b>

Source: Dobson | DaVanzo analysis of research identifiable 5% SAF for all sites of service, 2007-2009.

## Conclusion

Given the economic pressures to reduce Medicare spending and to provide beneficiaries with the most cost-effective care, study results indicate that patients could be receiving diagnostic services related to acute and chronic hearing loss and vestibular conditions directly from audiologists without a negative impact on patient safety or increased Medicare expenditures.