Whitson and Lin Page 2

The prevalence of hearing loss doubles with every age decade, and nearly twothirds of Americans older than 70 years have a clinically significant hearing impairment.

Given present-day understanding of the health effects of sensory loss and advances in technology, Medicare policy for coverage of hearing and vision rehabilitative services, established a half century ago, may need reconsideration. A key concern in today's economy is whether any extension of Medicare coverage policy is financially realistic. The prevalence of hearing loss doubles with every age decade, and nearly two-thirds of Americans older than 70 years have a clinically significant hearing impairment. Likewise, persons older than 70 years account for about80% of the 2.8 million Americans with low vision, defined as vision loss (excluding blindness) not correctable with refraction, medication, or surgery. The burden and prevalence of sensory impairments will continue to increase as the baby boomer generation ages, and such projections are not new.

What has more recently been appreciated are the long-term and public health implications of sensory impairment. Although sensory impairments diminish quality of life for the affected person, converging evidence suggests that vision and hearing loss have additional, cascading consequences for patient's families, caregivers, and society. Sensory impairments increase the risk for costly health outcomes of disability, depression, cognitive impairment, and dementia.^{2,5–7} Sensory loss impedes self-care and management of other chronic health conditions and may contribute to the higher rates of hospitalization among sensory-impaired older persons. Loss of independence adversely affects caregivers, leading to collateral third-person disability in social and daily functioning.

Thus, while the costs of extending coverage for sensory rehabilitation need to be carefully considered, equal consideration must be given to the societal and health care costs incurred by not enabling access to assistive devices that may prevent or delay the expensive consequences of sensory impairments. Medicare demonstration projects yield accurate estimates of costs incurred when a benefit is extended, but with some further investment, demonstration projects present an opportunity for comparative effectiveness research. For example, by restricting the expanded coverage policy to residents of particular counties, it is possible to collect and compare outcomes such as health care utilization, disability, and caregiver burden among participants who receive the new benefit and matched individuals who do not. This approach could enable more informed decisions about the cost-benefit tradeoff of revising policy. The lack of high-quality evidence remains an obstacle for other policy decisions regarding sensory impairment: the US Preventive Services Task Force has not issued a recommendation on screening for visual acuity or hearing impairment in older adults, citing "inadequate evidence to assess the balance of benefits and harms."

Technology to improve independence for those with noncorrectable vision and hearing loss has advanced in recent decades. Devices such as video magnifiers with miniature LED cameras provide high-definition, magnified images of almost anything, enabling activities from medication and financial management to personal grooming (costs range from \$500–\$3500). The devices can be equipped with software to recognize bar codes or read text aloud. Hearing aids have made similar progress with directional microphones, noise