

**Table. Prevalence and Number of Individuals in the United States With Hearing Loss<sup>a</sup>**

Variable	% (95% CI) <sup>b</sup>								
	Prevalence of Hearing Loss ≥25 dB (Bilateral) <sup>c</sup>						Prevalence of Hearing Loss ≥25 dB (Bilateral and Unilateral) <sup>c</sup>		
	Sex		Race/Ethnicity <sup>d</sup>			Total		Total	
	Female	Male	White	Black	Hispanic	Overall Prevalence	No. With Hearing Loss (in Millions)	Overall Prevalence	No. With Hearing Loss (in Millions)
Age, y									
12-19	0.42 (0-0.91)	0.20 (0-0.41)	0.26 (0-0.66)	0.48 (0.11-0.85)	0.43 (0.04-0.82)	0.31 (0.04-0.57)	0.10	2.3 (1.5-3.1)	0.76
20-29	0.35 (0-0.79)	0.48 (0-1.4)	0.43 (0-1.3)	0.63 (0-1.9)	0.35 (0-0.90)	0.42 (0-0.97)	0.16	3.2 (1.4-5.1)	1.2
30-39	0.79 (0-1.8)	2.5 (0.14-4.9)	1.8 (0-3.8)	1.7 (0-3.9)	1.6 (0.22-3.1)	1.6 (0.23-3.1)	0.68	5.4 (3.3-7.6)	2.3
40-49	4.5 (0.94-8.1)	8.7 (5.0-12.4)	7.4 (4.5-10.3)	1.3 (0-3.3)	7.3 (2.0-12.5)	6.5 (4.1-8.8)	2.8	12.9 (9.8-15.9)	5.6
50-59	6.1 (3.6-8.6)	20.3 (14.5-26.2)	14.5 (9.9-19.2)	7.1 (3.0-11.2)	13.8 (6.4-21.2)	13.1 (9.4-16.8)	4.4	28.5 (23.3-33.7)	9.6
60-69	16.8 (12.1-21.5)	39.2 (31.7-46.8)	26.6 (21.1-32.1)	15.9 (9.8-22.1)	28.9 (17.0-40.8)	26.8 (22.3-31.4)	5.7	44.9 (40.9-48.9)	9.5
70-79	48.5 (38.5-58.5)	63.4 (56.2-70.5)	55.8 (47.6-63.9)	39.0 (26.2-51.7)	66.8 (52.3-81.2)	55.1 (48.0-62.2)	8.8	68.1 (61.2-75.1)	10.8
≥80	75.6 (69.7-81.5)	84.6 (79.0-90.3)	81.5 (78.5-84.5)	54.8 (40.6-69.0)	60.7 (34.8-86.6)	79.1 (76.0-82.2)	7.3	89.1 (86.1-92.0)	8.3
Estimated total No. of individuals with hearing loss, (in millions)							30.0 <sup>e</sup>	48.1	

<sup>a</sup>National Health and Nutritional Examination Surveys 2001 through 2008 (n=7490)

<sup>b</sup>All values represent prevalence percentage except for the column titled "No. With Hearing Loss (in Millions)," which represents the number of prevalent cases.

<sup>c</sup>Hearing defined by the average of hearing thresholds at 0.5-, 1-, 2-, and 4-kHz tones presented by air conduction.

<sup>d</sup>Prevalence estimates by race/ethnicity are only presented for the 3 largest racial/ethnic groups. Individuals from all racial/ethnic groups are included in the overall prevalence.

<sup>e</sup>Numbers do not sum to group total because of rounding.

domains and the role of aural rehabilitative strategies in possibly mitigating these effects.

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## INVITED COMMENTARY

### Creating the Future of Aging

If dementia were a company, it would have the world's largest annual revenue, estimated at \$604 billion (2010).<sup>1</sup> Already, 5.4 million people in the United States live with Alzheimer-type dementia, which afflicts nearly half of us if we live past 85 years.<sup>2</sup> As Zilberberg and Tjia<sup>3</sup> estimate, with current utilization and diagnosis patterns, hospitalizations of persons with de-

mentia 85 years and older will increase almost 10-fold by 2050.

Our older years bring other problems, including age-related hearing loss, as various body parts wear out and lose their capacity to respond to stress. While we often view hearing loss as a social embarrassment rather than a medical problem, it increases social isolation, adds anxiety, and even correlates with increased risk of dementia. Lin and colleagues<sup>4</sup> report that functionally important hearing loss is commonplace (79.1% bilateral) past the age of 80 years.

These are predictable challenges. We already know nearly everyone in the United States who will be 85 years old in 25 years. So, where is the serious planning? Recent health reform debates cast the issues of frailty, dependency, multiple chronic conditions, and dying as small side issues in a care system dominated by hospitals and physicians who just need a little more reliability and efficiency. Yet, on any day, more people are in nursing homes than hospitals.<sup>5</sup> Already, approximately \$203 billion are spent annually on long-term care, and the voluntary support of family is estimated at an additional \$450 billion.<sup>6</sup> Those sums will multiply as the baby boomers age, as the 2 reports in this issue of the *Archives* demonstrate.<sup>3,4</sup> By 2050, approximately 27 million people will need formal long-term care,<sup>7</sup> compared with the current prevalence of 9 million.<sup>8</sup> Yet no comprehensive plan for efficient, reliable, medical care and supportive services exists. Other developed countries have policies to support family caregivers, and they have local authorities that monitor and try to meet needs for transportation, in-home aides, and medication delivery. The United States does not; we do not even have deliberate policy to expand the ranks of personnel needed to meet the coming demands, whether front-line home health aides or geriatricians.

What do we need in order to take care of one another well and efficiently in the coming years? First and foremost, we need to recognize this challenge and forge the will to meet it, despite soft economies and unfamiliar social arrangements. If we fail, we will have to learn to abandon frail old women (because wives mostly care for and then outlive husbands),<sup>9</sup> but surely our society can do better than that.

With the will, we can embark on learning how to shape workable, efficient, reliable systems of support for complex social and medical conditions associated with advanced age. Building these dependable systems will require creating the coalitions and authorities to tackle many problems at the local level. Area Agencies on Aging, local departments of health, county and city councils, and the coalitions arising to improve care transitions in the Partnership for Patients<sup>10</sup> could generate the insight and authority to monitor and adjust local services and arrangements. The opportunity to build social capital around these problems in the Community-Based Care Transitions Program<sup>11</sup> is a very important step, and all concerned clinicians should be sure that their community is working toward these goals.

Second, we need to grow the professional and volunteer workforce to provide the services. Currently, the United States has only 9000 trained geriatricians<sup>5</sup> and 2883 palliative care specialists.<sup>12</sup> We need to train and retain physicians to serve millions of elderly persons. At any

time, millions of Americans will be providing some level of caregiving to an older adult. These caregivers need training, respite, support, funding, retirement, and health insurance, as do aides that provide most of the services in home care and nursing homes. At present, most aides are not even protected by fair labor laws that ensure standard health care benefits or minimum wage and working condition protections.<sup>13</sup> Especially with smaller families and less adequate retirement security for current workers, building adequate caregiver support must become a political issue for clinicians and for the country.

Finally, of course, Americans must come to terms with the new expectation of a substantial period of disability in old age. We have to learn to discuss the likely course and make plans, to save for that expected period of disability, and to figure out what sorts of treatments to extend life will be desired and what other concerns will have become priorities. We need to build housing that adapts to disabilities, to build schools that are planned for evolution to senior centers, to create neighborliness that supports fragile people to delay or avert institutional care, and mostly to figure out how to create sustainable systems that reliably help elderly persons with disabilities to live comfortably and meaningfully. And we need to get under way before we are overwhelmed.

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