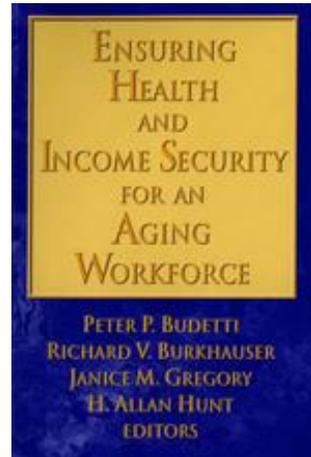

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Living Longer, but Able to Work?

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There is ample evidence that retirement is much more common and is occurring at younger ages than at any previous time in U.S. history. Despite earlier suggestions that this trend is caused by declines in the average health of older working populations (Verbrugge 1984), more recent data has effectively rebutted this assumption by demonstrating a significant wealth effect (Ycas 1987; Shephard 1995). Social welfare policy now seeks to postpone publicly financed retirement. Whether this will succeed or not depends on the ability of those who would retire on Social Security—but are now expected to work longer—to sustain continued and substantial employment. In part, this will be a function of their health status and functional capacity, manifest as the capacity to work in those jobs that will be available to them.

The work status of an individual at any point in time is a function of retirement choices, functional capacity, and the requirements of employment. Involvement in the workforce can be viewed on a continuum from regular, full-time employment to informal, part-time or occasional work. Salary, benefits, and other dimensions of work may vary independently of the level of involvement. Retirement choices reflect an individual's economic resources (including wage replacement benefit adequacy and availability), preferences, employment alternatives, and outlook, as well as societal norms.

The ability to work is also an important influence on the retirement decision. This is best understood in relation to the demands of a particular job and is determined by prior skills and training, the effects of normal aging processes, and the presence of chronic diseases. Job demands include cognitive, interpersonal, and physical requirements; they may be expressed as typical or minimal requirements and may be moderated by accommodations. In order to appropriately assess the effect of aging and health on capacity to work, the contribution of all of these factors must be considered.

LONGEVITY AND HEALTH

There is no doubt that Americans are living longer (Table 1). Much of the reduction in mortality over the past decade is attributed to improvements in the diagnosis, treatment, and prevention of cardiovascular and other chronic diseases, as well as to lifestyle modifications such as improvements in diet, exercise, and rates of cigarette smoking.

Has success in mortality reduction resulted in an aging population with more morbidity, less ability to function, and thus less average work capacity at a given age? Or, have gains in morbidity paralleled gains in mortality, so that there is a prolongation of disease-free and highly functional years of life? A definitive answer would require repeated, objective measures of illness and function for large successive cohorts of Americans near retirement age—information that is not now available. Most attempts to address these questions have relied upon data from large, national, cross-sectional self-report surveys (Current Population Survey, the National Health Interview Survey [NHIS], and the Health and Retirement Study), or smaller longitudinal datasets from specific studies, such as the University of Pennsylvania graduates study.

The NHIS has been conducted as a stratified, cross-sectional survey of thousands of Americans each year since 1957. Detailed questionnaires ask about health, functional limitations, medical care, and socioeconomic status. Table 2 shows the dramatic age-related increase in men in the prevalence of selected self-reported chronic diseases and

Table 1 Life Expectancy in the United States at Birth and at Age 65, by Sex (yr.)

Year	At birth		At age 65	
	Males	Females	Males	Females
1900	46	48	12	12
1950	66	71	13	15
1970	67	75	13	17
1995	73	79	16	19

SOURCE: <http://www.cdc.gov/nchs/about/otheract/aging/trendsoverview.htm> (Accessed May 2000); Kramarow et al. 1999.

Table 2 National Health Interview Study, Disease/Condition Prevalence by Age (per 1000 Males)

Disease or condition	NHIS, 1981		NHIS, 1996	
	Age 45–64	65–74	45–64	65–74
Hypertension	203	315	233	352
Diabetes	56	29	62	131
Respiratory	13	42	11	59
Heart disease	132	266	143	362
Less than good health			163	270
Limited in major activity	195	450	165	251
Limited in any activity	230	490	220	334

SOURCE: Adams, Hendershot, and Marano 1999.

limitations in ability to perform one's major life activity. Major life activity is defined as working or keeping house in those age 45–64. The reported prevalence of several chronic conditions increased significantly from 1981 to 1996. This likely represents a real change, but may be due to reporting biases as a result of better and earlier disease detection (Verburgge 1984, 1989). Despite these increases, the impact of these conditions on function appears to be significantly less in 1996 than in 1981, especially in the elderly. This is consistent with greater prevalence yet lower functional impact of these conditions. Data from a smaller but more detailed Finnish longitudinal study of municipal workers further supports this premise (Tuomi 1997). Only 11 percent of workers with chronic illness said that their health was good in 1981, but the number was 42 percent in 1992. Similar findings also appear in the Health and Retirement Study (Crimmins et al. 1995), where the age-related increase in prevalence of chronic diseases was higher than the age-related increase in disability incidence.

Tables 3 and 4 demonstrate trends in self-reported work disability by age, emphasizing that those who have some functional limitations are much less likely to be working as they age. These responses are somewhat biased by current employment and retirement status. Personal beliefs also influence responses; for example, surveys of those with cardiac conditions have demonstrated self-reported work limita-

Table 3 Persons with Work Disability by Age, 1998 (% of population)

Age group	With work disability	With work disability, not severe	With work disability, severe
16-24	4.1	1.5	2.7
25-34	5.5	2.0	3.5
35-44	9.1	3.0	6.1
45-54	13.2	4.6	8.6
55-64	23.1	7.7	15.4
65-69	23.0	14.9	8.1
70-74	26.4	18.5	7.9

Table 4 Persons with and without Work Disability Who are Employed or Employable, by Age and Sex, 1998 (percent of group who are employed or employable)

Age group	Males		Females	
	With work disability	Without work disability	With work disability	Without work disability
16-24	30.9	67.5	43.8	63.2
25-34	41.8	96.1	36.3	79.4
35-44	35.8	97.1	35.4	81.8
45-54	37.5	97.3	28.9	83.5
55-64	21.6	81.4	15.7	63.5
65-69	10.5	31.4	7.4	22.6
70-74	9.5	18.6	3.3	11.6

SOURCE: U.S. Census Bureau 2000.

tions that are inconsistent with objective evidence of normal function and disease status (Fitzgerald 1993).

Thus, it is reasonable to conclude that an increased risk of chronic disease and associated functional limitation is an expected consequence of surviving into old age. Although the rates of illness and functional limitations increase with age, in some cases in a nonlinear fashion, there is no evidence of a specific age threshold where dramatic and consistent effects occur (Garg 1991). Although this observation

could be a consequence of limitations in available data, the consistency of findings across studies lends credence to this conclusion.

One consistent finding is a major concern in relation to Social Security postponement. Low-income persons are most likely to be entirely dependent on Social Security for retirement. In the NHIS data, the rates and severity of illness and disability are inversely related to income. The American Changing Lives survey (House 1994) also documented a dramatic difference in significant functional limitations in low-income persons versus higher-income persons in every decade of age after 45 years old. A recent longitudinal study of university alumni found that healthy lifestyles were correlated with more disability-free years of life (Vita 1998); however, there is a strong inverse correlation between negative health risk behaviors and income. Thus, survey results and economic projections that are not stratified by income may not be helpful in answering questions about Social Security postponement.

AGING AND WORK CAPACITY

The effects of the normal aging process may be a much more common potential limitation to extending regular employment for most workers than are specific diseases. Many studies have documented age-related decrements in sensory, cardiovascular, motor, and cognitive function, and decreases in long-term memory, reaction time, learning ability, isometric strength, and job performance (Garg 1991; Robertson and Tracy 1998; de Zwart, 1995). Average changes over a 40-year working lifespan were frequently on the order of 5–15 percent. However, those studies that employed a longitudinal design have often found that the most consistent age-related change is increased variance, greater than the mean change for most measures (de Zwart, Frings-Dresen, and VanDijk 1995; Robertson and Tracy 1998). Thus, it appears that there is more variation in physical and cognitive abilities among older people than among the young. This would also argue against a standard cut-off age for retirement. In a classic review of studies of age-related changes in job performance, Doering (1983) concluded that the results were mixed and inconclusive, although older

workers did appear to consistently have difficulties in those rare jobs that required maximal levels of physical exertion.

Work capacity is significant only in relation to the demands of a specific job. Studies of persons with severe disabilities who are highly motivated to seek and maintain employment demonstrate that “objective” measures of ability to engage in gainful employment are poor predictors of actual employability. Many older workers with impairments gradually transition out of physically demanding jobs as they age. Thus, to understand the effects of health on work, job demands and accommodations, job selection, and motivation must all be considered (WHO 1993). Studies of older workers suggest that specific workplace design, training, organization, and accommodation approaches will increase employability (Shephard 1995).

As the economy evolves, the range of jobs available to older workers will change (Table 5), presenting both opportunities and challenges. As work shifts to less physically demanding jobs, many functional limitations will become less important. However, increased cognitive demands, new technologies, and requirements for longer work hours

Table 5 Projected Job Growth for the Top Ten Occupations, 1998–2008

Occupation	Employment in 1998 (thousands)	Change by 2008	
		Thousands	%
Systems analysts	617	577	94
Retail salespersons	4,056	563	14
Cashiers	3,198	556	17
General managers and top executives	3,362	551	16
Truck drivers, light and heavy	2,970	493	17
Office clerks, general	3,021	463	15
Registered nurses	2,079	451	22
Computer support specialists	429	439	102
Personal care and home health aides	746	433	58
Teacher assistants	1,192	375	31

SOURCE: Bureau of Labor Statistics 2000.

may present more challenges for older than for younger workers. Innovative training, work organization, and accommodation strategies will be required in order to engage and retain them in these jobs (Sterns and Doverspike 1988).

CONCLUSION

Although an impressive body of literature is available on health, aging, and work, few conclusions are broadly generalizable. Recent findings of improvement in the average work capacity of older workers does not necessarily lead to a positive conclusion about the feasibility of continued work for those who will depend upon Social Security. Further research is needed to define and evaluate these issues for those who will primarily depend upon this source of income in their later years.

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