Commentaries and Authors’ Response

Robine and Michel’s “Looking Forward to a General Theory on Population Aging”

Australia Is Still Aging Well

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Robine and Michel’s article (1) presents a complex thesis about the interaction between longevity, disability, and morbidity.

Their perhaps overnuanced interpretation of the data depends heavily on the robustness of the data and the comparability of data between countries as well as within countries, a dependence that we believe is betrayed by the quality of the data. Their opening sentence finds a conflict in decline in limitation of physical function such as carrying a 10-pound load compared with a decline in activities of daily living (ADL) disability, which we cannot.

But their main issue is with data conflicts between the “old” and the “new” worlds. They contend that, in Europe and the United States, there is a decline in disability, whereas in Taiwan and Australia, there may be an increase in disability. Most of the data pertaining to Australia comes from “Health Expectancy In Australia” by Davis and colleagues (2). Australia is fortunate to have data collected in a similar though not entirely consistent, systematic manner via Australian Bureau of Statistics surveys in the years 1981, 1988, 1993, and 1998. The definitions used in the surveys are based on the World Health Organization’s international classification of impairment, disability, and handicaps. Over the decades, the classification of disability in the data collected has increased. In 1981–1988, disability data was collected on 12 conditions. In 1993, this was expanded to include difficulty gripping or holding small objects, head injury, stroke, or brain damage that restricts daily activities. In 1998, the survey incorporated chronic or recurring pain and breathing difficulties that restrict everyday activities. Severe handicap also moved to involve profound handicap in 1993 and 1998. This expansion of the definition is one reason for disability at all levels increasing in the Australian population.

The changes in definitions, and perhaps in societal attitudes, probably best explains the largest increase in handicap, which was in boys aged 5 to 14 years, from 7.3% to 10.6% with any disability and 2.7% to 4.9% with severe and profound handicap (2).

Other reasons for increased reporting of disability may be changing attitudes and community awareness, which has meant that people are more willing to report diseases such as depression, the top ranking nonfatal disease burden in Australia (3). Self-assessment of abilities and limitations and the need for government assistance may have increased reporting, especially in view of changing government policy. Furthermore the expansion of government programs, such as in falls prevention, has hopefully resulted in a greater popular understanding that diseases cause these problems rather than ascribing deteriorations to aging, thereby contributing to the increased reporting of handicaps.

Robine and Michel may be on firmer ground when they note an increase in the prevalence of chronic diseases despite a decrease in disability. They surmise correctly, in our view, that this is clearly due to more frequent diagnosis of less severe illness. Certainly, Australian mortality data show decreasing mortality from the noninfectious epidemics of coronary heart disease, stroke, and lung cancer, which would be consistent with this conclusion (4). There may be, as they suggest, a pandemic of light and moderate disability, but we would suggest a more likely conclusion would be earlier diagnosis of chronic conditions and perhaps better treatment leading to reduced disability and mortality from these illnesses. In some cases, earlier diagnosis may be driven by increased awareness in recent years, particularly with neurodegenerative diseases, specifically dementia, but also with other diseases of aging such as osteoporosis, where awareness and means for diagnosis have become more widely available. This, in turn, is partly driven by the availability of pharmacological treatments that may justify earlier diagnosis, but also because they prompt pharmaceutical companies to fund awareness campaigns.

There is also emerging evidence that these pharmacological agents, despite their lack of potency to cure the disease, may decrease disability (5). The initial trials on acetylcholinesterase inhibitors, and now also memantine, demonstrated improvements in ADLs. But recent nonrandomized studies also suggest a delay in nursing home admission, which may be more solid evidence of functional improvement, although the role of behavioral improvement is likely also significant (6,7). Although, whether the use of these agents is sufficiently widespread to impact on nationwide disability data is unclear.

An amelioration in the disabling effects of neurodegenerative diseases is more likely to decrease disability in the
oldest-old, where the prevalence of chronic cardiac and respiratory failure is decreasing according to recent Australian data (8).

In conclusion, we believe that it is not possible to differentiate between “new” and “old” countries on the basis of disability, using the existing Australian data.

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