Timo E. Strandberg, MD, PhD
University of Helsinki, Clinicum, and Helsinki University Hospital, Helsinki, Finland
Center for Life Course Health Research, University of Oulu, Oulu, Finland

ACKNOWLEDGMENTS

Conflicts of Interest: I have made various cooperation (research, consultative, educational) with companies marketing generic statins, and use myself a statin daily.

Author Contributions: Timo Strandberg is the sole author.

Sponsor's Role: None.

REFERENCES

1. Singh S, Zieman S, Go AS, et al. Statins for primary prevention in older adults—moving toward evidence-based decision-making. J Am Geriatr Soc 2018;66:2188-2196.
2. Beckett NS, Peters R, Fletcher AE, et al. Treatment of hypertension in patients 80 years of age or older. N Engl J Med 2008;358:1887-1898.
3. Strandberg TE, Kolehmainen L, Vuorio A. Evaluation and treatment of older patients with hypercholesterolemia: a clinical review. JAMA 2014;312:1136-1144.
4. Collins R, Reith C, Emberson J, et al. Interpretation of the evidence for the efficacy and safety of statin therapy. Lancet 2016;388:2532-2561.
5. Orkaby AR, Gaziano JM, Djousse L, Driver JA. Statins for primary prevention of cardiovascular events and mortality in older men. J Am Geriatr Soc 2017;65:2362-2368.
6. Pilotto A, Panza F, Copetti M, et al. Statin treatment and mortality in community-dwelling frail older patients with diabetes mellitus: a retrospective observational study. PLoS One 2015;10(6):e0130946. https://doi.org/10.1371/journal.pone.0130946.
7. Pilotto A, Gallina P, Panza F, et al. Relation of statin use and mortality in community-dwelling frail older patients with coronary artery disease. Am J Cardiol 2016;118:1624-1630.

REPLY TO: STATINS FOR PRIMARY PREVENTION IN OLDER ADULTS

To the Editor: Dr. Strandberg appropriately highlights challenges in the recruitment and conduct of a placebo-controlled trial of statins for primary prevention of cardiovascular events among people 75 years and older.[1] Consistent with his concerns about the frequent use of statins for primary prevention among adults older than 75 years, we found that 41% of participants 75 years or older without cardiovascular disease were already using statins in an integrated health delivery system in the United States.[2] However, this situation provides a window of opportunity to conduct a trial rather than arguing against the need for one. We agree that any proposed trial should be designed to address concerns about the risk of competing outcomes such as mortality through the choice of appropriate end points (eg, disability-free survival) and to use statistical methods that address competing risks.[3]

A duration of follow-up in an adequately powered primary prevention statin trial could allow accrual of sufficient events to demonstrate benefits and risks. Another benefit of such a trial among older adults would be to generate high-quality evidence on several additional noncardiovascular outcomes (eg, cognitive outcomes, frailty) of importance to older adults, where high-quality data from randomized controlled trials (RCTs) are unavailable and inferences have been drawn from meta-analysis or observational studies prone to bias and confounding.

Dr. Strandberg expresses concerns that the inability to demonstrate an effect in a trial of statins for primary prevention among older adults would dissuade prescribers and patients and result in discontinuation of statins. However, it would be premature to predict the results in advance of any proposed trial of initiation of statin therapy for primary prevention among older adults. Trials of initiation of therapy are distinct from discontinuation trials, and these two different trial designs may generate complementary evidence.

Making treatment decisions based on so-called educated guesses and inferences from results from observational studies may expose patients to uncertain benefits and potential harms. The literature is replete with instances in which the beneficial findings of earlier observational studies were refuted by subsequent RCTs.[4] We are pleased that the National Institutes of Health will be supporting a clinical trial on the effects of statins in older adults without clinical cardiovascular disease that will address important clinical questions including the effect of statins on the universal primary health outcome of survival free of dementia and persistent physical disability and several other outcomes of importance to older adults.[5]

Sonal Singh, MD, MPH
University of Massachusetts Medical School and the Meyers Primary Care Institute, Worcester, Massachusetts

Alan S. Go, MD
Division of Research, Kaiser Permanente Northern California, Oakland, California

Nanette K. Wenger, MD
Division of Cardiology, Department of Medicine, Emory University School of Medicine, Emory Women's Heart Center, Emory Heart and Vascular Center, Atlanta, Georgia

Sophia Zoungas, MD
School of Public Health and Preventive Medicine, Monash University, Melbourne, Australia
The George Institute for Global Health, Sydney, Australia

Jerry H. Gurwitz, MD
University of Massachusetts Medical School and the Meyers Primary Care Institute, Worcester, Massachusetts

ACKNOWLEDGMENTS

Conflicts of Interest: S.S. reports giving expert testimony for plaintiffs' attorneys in litigation involving a statin. A.G. reports receiving a research grant through his institution from Sanofi. N.K.W. reports Research Grants/Contracts/Trial Steering Committee/Trial Data Safety and

This letter comments on the letter by Timo Strandberg

Monitoring Board involvement with Gilead Sciences, National Heart, Lung, and Blood Institute, Pfizer, and Society for Women's Health Research. She also reports consultancies with Amgen, AstraZeneca, Gilead Sciences, Janssen Pharmaceuticals, and Merck. S.Z. reports past participation in advisory boards/educational meetings/research on behalf of Monash University (for work unrelated to this article) with AstraZeneca Pty Ltd, Eli Lilly Australia Pty Ltd, Merck Sharp & Dohme (Australia) Pty Ltd, Novo Nordisk Pty Ltd, and Six Degrees Academy. J.H.G. serves as a member of the UnitedHealthcare Pharmacy & Therapeutics Committee.

Author Contributions: All authors contributed to the manuscript.

Sponsor's Role: The National Institute on Aging (NIA) and the National Heart, Lung, and Blood Institute (NHLBI) sponsored the workshop "Opportunities for Trials on Effects of Statins in Primary Prevention in Older Adults," Bethesda, Maryland, July 31-August 1, 2017.

The content of this letter reflects the views of the authors and does not necessarily reflect the official views or policies of the NIA, the NHLBI, the National Institutes of Health, or the US Department of Health and Human Services.

REFERENCES

1. Strandberg TE. Challenges of a statin trial in older people. J Am Geriatr Soc. 2019. https://doi.org/10.1111/jgs.15763.
2. Singh S, Zieman S, Go AS, et al. Statins for primary prevention in older adults—moving toward evidence-based decision-making. J Am Geriatr Soc. 2018;66:2188-2196.
3. Varadhan R, Weiss CO, Segal JB, Wu AW, Scharfstein D, Boyd C. Evaluating health outcomes in the presence of competing risks: a review of statistical methods and clinical applications. Med Care. 2010;48:S96-S105.
4. Anderson GL, Limacher M, Assaf AR, et al. Effects of conjugated equine estrogen in postmenopausal women with hysterectomy: the Women's Health Initiative randomized controlled trial. JAMA. 2004;291:1701-1712.
5. Department of Health and Human Services. Clinical Trial on Effects of Statins in Older Adults without Clinical Cardiovascular Disease. https://grants.nih.gov/grants/guide/rfa-files/rfa-ag-19-020.html. Accessed December 14, 2018.

ELDERLY PEOPLE WITH DISABILITIES IN CHINA

To the Editor: Over a billion people, comprising 15% of the world's population, have some form of disability.[1] The number of disabilities is continuing to grow due to population aging and increased accidents and chronic disorders.[2] China has the largest population of elderly people[3]; however, studies on disabilities in Chinese elderly people have rarely been reported. Here, we report nationwide disabilities of Chinese elderly people.

METHODS

We obtained data from the 2006 National Survey on Disability. The survey used multistage, stratified, random cluster sampling of the noninstitutionalized 2.5 million population of mainland China, with probability proportional to size, to derive nationally representative samples.[4] The sample cases in each age group matched with the population structure based on the 2005 estimation. Disabilities were determined by trained interviewers who used the *International Classification of Functioning, Disability and Health*[5] to inquire about visual, hearing, and speech disability, physical or intellectual disability, and mental disability, as previously described by Zheng et al.[4] Those who have two or more kind of disabilities were defined as multiple disability. Total number and prevalence of disabilities in elderly people aged 60 years or older in 2010 were standardized using the general rates of the 2010 National Population Census.[6]

RESULTS

Disabilities were identified in 85,260 elderly individuals (40,321 men, 47.3%) among the 354,859 sample elderly population (171,903 men, 48.4%) surveyed, indicating prevalence of 240 per 1000 elderly individuals and significantly higher prevalence in women (24.6% vs 23.5% in men; $P < .001$; 95% confidence interval = 1.03-1.06). Overall, the prevalence of disabilities increased from 12.4% among elderly individuals aged 60 to 64 years to 55.9% among elderly individuals aged 85 years or older (all $P < .001$). Table 1 shows the number and prevalence of the elderly individuals included in this study.

Among the disabilities in elderly individuals, the most prevalent disabilities were hearing loss of 8.3%, physical disability of 6.1%, visual disability of 4.6%, followed by multiple disabilities of 3.9%, mental disability of 0.7%, intellectual disability of 0.3%, and speech disability of 0.1%. Elderly women showed higher prevalence of visual disability, mental disability, and multiple disability, while elderly men had higher prevalence of hearing loss and speech disability (Table 1). Predominant risk factors were presbycusis (72.5%) and tympanitis (9.4%) for hearing loss, cataracts (68.4%) and retinopathy and pigment choroidopathy (12.9%) for visual loss, cerebrovascular disease (31.5%) and osteoarthritis (27.0%) for physical disability, cerebral infarction (40.1%) for speech disability, brain disease (57.4%) for intellectual disability, and schizophrenia (35.0%) and dementia (34.5%) for mental disability.

The 2010 National Census disclosed 177 million (13.3%) people aged 60 years or older, including 118 million (8.9%) people aged 65 years or older, in mainland China. Accordingly, elderly people with disabilities were an estimated 42.7 million, including 14.8 million with hearing loss, 10.7 million with physical disability, 8.2 million with visual disability, 7.0 million with multiple disability, 1.2 million with mental disability, half million with intellectual disability, and 300,000 with speech disability.

DISCUSSION

In this study, we demonstrate that over half (51.5%) of the disabled population (82.96 million) in mainland China were people older than 60 years. This situation may become more serious in the future due to population aging.