Invited Response to Letter to the Editor

THE IMPORTANCE OF A STANDARDIZED INSTRUMENT TO ASSESS THE BURDEN OF MULTIMORBIDITY

Claudia Diederichs,1 Dorothee B. Bartels,2,3 and Klaus Berger1

2Department of Epidemiology and Social Medicine, Medical Faculty, University of Münster, Germany.
3Institute of Epidemiology, Social Medicine and Health Systems Research, Center for Public Health and Health Care, Hannover Medical School, Germany.

Address correspondence to Claudia Diederichs, MPH, Institute of Epidemiology and Social Medicine, University of Münster, Domagkstraße 3, 48148 Münster, Germany. Email: cdiederi@uni-muenster.de

Received July 26, 2011; Accepted August 9, 2011

Decision Editor: Luigi Ferrucci, MD, PhD

Dear Sir,

The PROFUND researchers have developed a new index predicting mortality for polypathological patients. They enhanced the traditional approach of simply summing up the number of (weighted) chronic diseases by including information on the patients’ age, caregiver situation, hemoglobin level, and the performance in activities of daily living with the Barthel index. A specific population consisting of 1,632 patients with multiple diseases was used to develop the index. With a focus on severely ill patients, the PROFUND index is clearly clinical oriented, providing useful information on the individual health status.

However, it is not suited to generate data on mild to moderate burden of multimorbidity from a population perspective. From this perspective, it is important to first establish a common set of diseases that accounts for multimorbidity. This set of chronic conditions has to be selected on the basis of well-defined criteria, such as the duration, the severity, or the curability of a disease. Second, single conditions have to be weighted according to their impact on different outcomes, for example, mortality, physical impairment, quality of life, and health care costs. For the calculation of weights, it is important to use population-based data, which increases the validity of the results. Until now, the majority of weighted indices have been developed on the basis of older hospital patients (1–3) or other specific populations, such as veterans (4,5) or Medicare enrollees (6), complicating the transferability of weights on other populations.

Instead of focusing on multimorbid people to develop a common standardized index, we are currently working on an approach to derive mean weights for different outcomes on the basis of several different representative populations. We have already identified five population-based studies in Germany using self-reported information on the prevalence of a variety of chronic diseases. Furthermore, in all five studies, a common outcome variable—the self-reported health status—was assessed. We were able to show that 7 of 10 chronic diseases had a similar impact across all five studies, providing valid weights for this outcome, which becomes increasingly important in health research, since it reflects the patient perspective. This method of calculating common weights for chronic diseases in multimorbidity indices can be further used to derive weights for other outcomes, such as mortality.

The final objective is to provide a defined set of chronic conditions, which is always used as a standardized index to assess the burden of multimorbidity in epidemiological studies. The advantage of a common index is that multimorbidity can be compared between different studies, which is often impossible due to the different number and types of diseases. By adding weights to single conditions, an aggregated multimorbidity score can be used as an effective instrument to control the influence of diseases on specific outcomes.

Funding

The project was funded by the Ministry of Education and Research within the research cooperation “Health in old age” (01ET0723).

Conflict of Interest

The authors have no conflicts of interest to report.

References


