Despite advances in therapeutic technology and disease prevention methods, such as vaccination programs and health screening, both the incidence and burden of disease is increasing. Consequently, efforts to measure the global burden of disease and injury over the past 20 years have been sustained through the ‘Global Burden of Disease and Injury (GBD)’ study. The GBD study began in the early 1990s and results are published annually by *The Lancet*. The Institute for Health Metrics and Evaluation (IHME), which oversees the GBD study, has expanded the use of disease burden and related indicators such as disability-adjusted life years (DALYs) and health-adjusted life expectancy (HALE), in health policy, through a ‘memorandum of understanding’ agreement with the World Health Organization in 2018, and this expansion is expected to continue in the future.

In Korea, since early 2000, there has been an effort to measure the burden of disease for a more accurate and policy-based utilization, based on real-world data (RWD). From 2013, we implemented a methodology to measure disease burden by using ‘big data’ such as national medical claims data and cause of death data. In 2016, we published this methodology, and the results provided for disease burden in Korea in 2012, as a supplemental issue of the *Journal of Korean Medical Science* (JKMS).

The current supplemental issue consists of one special article, one opinion, and 10 original articles. The special article emphasizes the importance of linking real-world data to health policy, and the opinion article presents the results of a study on disease burden in Australia. The original articles cover a comprehensive range of methodologies related to burden of disease, a snapshot of disease burden and trends in 2015, and regional inequalities, future predictions of disease burden, related to economic burden.

As a guest editor of this supplemental issue of *JKMS*, I hope this issue will promote an interest in population health, and an understanding of disease burden. Furthermore, I hope that policy makers and researchers should develop a better understanding of the relationship between the policy-making process and disease burden research, from the articles herein. Finally, I would like to offer my great appreciation to the Ministry of Health and Welfare in Korea, and the editor-in-chief of *JKMS*, for their support in the planning and publication of this supplemental issue.