

## EDITORIAL

## Prologue: Special Spotlight Issue on Japan

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High blood pressure (BP; hypertension) is a leading global health risk. In an international survey, the prevalence of persons who had systolic BP (SBP)  $\geq 140$  mm Hg increased substantially from 1990 to 2015, and deaths and losses of disability-adjusted life-years (DALYs) associated with high BP also increased [1]. The drivers of these trends include urbanization in developing countries, increased dietary salt intake, low consumption of fruits and vegetables, overweight and obesity, low physical activity, and ecosystem disruption (e.g., pollution and natural disasters). The management of hypertension at the population level must continue to strengthen as a team effort.

Evidence-based guidelines are used in health care systems to aid in treatment decisions and ensure quality and consistency in patient care throughout the world. Recommendations within guidelines are used for decision-making not only in clinical practice but also to address larger issues within health systems, including health insurance reimbursement, health policy formation, and topics across the health care continuum (e.g. health promotion, screening, diagnosis). Guidelines are established generally based on systematic reviews of healthcare interventions, diagnostic tests, prognostic markers, and cost-effective analyses. During the process, methodological rigor and involvement of multidisciplinary healthcare professionals, tailoring the recommendations to the challenges and needs of their own countries, are essential to help ensure the acceptance and successful implementation of guidelines.

BP guidelines for care are published by several internationally recognized organizations, including those from the United States, United Kingdom, Canada, China, and Japan. The quality of guidelines across countries can be assessed and compared using the Appraisal of Guidelines for Research and Evaluation (AGREE) instrument. The instrument includes 23 key items divided into 6 domains, including *Scope and Purpose*, *Stakeholder Involvement*, *Rigor of Development*, *Clarity and Presentation*, *Applicability*, and *Editorial Independence*. Elucidating the differences in BP guidelines across countries, along with identifying knowledge gaps in each, will highlight the need for reevaluation of the literature to provide relevant updates to guidelines and improve best clinical practices. By striving to achieve consensus, the global community will unite in its approach for decreasing the CVD burden of vulnerable populations.

In this *special spotlight issue on Japan*, each review explores similarities and differences among the latest BP management guidelines from Japan, the US, and Europe. Hisamatsu and Miura discuss differences in the prevalence, awareness, treatment, and control of hypertension between Japan vs. the US and Europe, and the reasons for the differences. Asayama et al., identify how and why the use of BP measurements in the diagnosis and treatment of hypertension differs between Japan vs. the US and Europe. Nishiyama and Tsuchihashi et al., provide an overview of the current understanding of the relationship between sodium intake and BP, including prevalence, pathophysiology, and treatment. Kario et al., discusses how and why choices regarding initial medication and BP target

levels differ between Japan vs. the US and Europe. Sakima et al., discuss how to put the guideline into practice in Japan. Each of the selected reviews identifies aspects of BP management that should be discussed further in future BP guidelines worldwide, as well as the types of research that are required to advance knowledge in specific areas. Collectively, the information presented in this special issue affirms that BP guidelines are a means to building a better health system to provide better care and treatment for people—a means to an end, not an end in themselves.

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## REFERENCE

- Forouzanfar MH, Liu P, Roth GA, Ng M, Biryukov S, Marczak L, et al. Global burden of hypertension and systolic blood pressure of at least 110 to 115 mm Hg, 1990–2015. *JAMA*. 2017;317:165–82.

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**ADDITIONAL INFORMATION**

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