

## EDITORIAL

# The HOPE Asia Network activity 2022: Towards better hypertension management in Asia

Welcome to the third special Asia issue of *Journal of Clinical Hypertension*. This follows on from the success of the first two Asia special issues, published in 2020 and 2021. An important driver for hypertension research and guidance in the Asian region is the Hypertension Outcome Prevention and Evidence in Asia (HOPE Asia) Network, which has published a variety of resources and research, starting in 2017 with a statement on home blood pressure monitoring (HBPM).<sup>1</sup> More recently, the HOPE Asia Network has released guidance on the management of hypertension in the context of the coronavirus disease 2019 (COVID-19) pandemic.<sup>2</sup> This pandemic has limited face-to-face interactions, not only between clinicians and their patients, but also among colleagues and researchers. Despite these challenges, the HOPE Asia Network has continued to work and collaborate remotely to allow the important task of improving hypertension management in Asia to continue.

## TRENDS IN HYPERTENSION PREVALENCE

Fortunately, there is a growing body of evidence to support locally-relevant solutions for hypertension management in clinical practice.<sup>3-5</sup> Excellent data and guidance comes from the in-depth work of the NCD (Non-Communicable Diseases) Risk Factor Collaboration, who recently published an extensive population study of worldwide trends in hypertension prevalence, and progress in treatment and control from 1990 to 2019.<sup>6</sup> This study pools community-based data from 184 countries worldwide that show that proportion of the global population aged 30–79 years who have hypertension has almost doubled over the last 30 years. This increase was largely driven by increased prevalence rates in low- and middle-income countries. In fact, in 2019, 82% of the world's hypertensive population was made up of people from low- and middle-income countries. Some countries in Central Asia were among those with a high prevalence of hypertension (>50%), while some other Asian countries/regions had a lower hypertension prevalence (Taiwan, South Korea, Japan and Bangladesh).<sup>6</sup> Factors that may contribute to local hypertension prevalence rates include regional climate, food culture and national efforts to control hypertension, which need to be actively identified and addressed in each country.

Another important finding from the NCD Risk Factor Collaboration study was that 51% of men and 41% of women who were diagnosed with hypertension in 2019 had not previously had any hypertension diagnosis.<sup>6</sup> This highlights the value of mass blood pressure (BP) screening initiatives, especially in low- to middle-income countries, and is a key driver for the promotion of the worldwide May Measurement Month (MMM) campaign by the International Society of Hypertension.

Also highly relevant in the global fight against hypertension are rates of both treatment and BP control.<sup>6</sup> Although treatment rates are over 50%,<sup>6</sup> there is still substantial room for improvement in BP control rates. Globally in 2019, only 18% of men and 23% of women with hypertension had good BP control.<sup>6</sup> Again, there was substantial variation between countries, and this is also the case in Asia, as documented in the HOPE Asia Networks' Asia BP@Home study.<sup>7</sup> Based on the data for Asia, hypertension treatment and control rates were high in South Korea and Taiwan, and low in Nepal and Indonesia.<sup>6</sup>

The NCD Risk Factor Collaboration data showed that low- and middle-income countries in East and South Asia had higher rates of undiagnosed hypertension in the presence of high BP compared with high-income countries in Asia (46–55% vs. 29–34%).<sup>6</sup> In addition, the low- and middle-income countries had substantially lower hypertension control rates compared with high-income countries in Asia (11–17% vs. 55–67%).<sup>6</sup> These variations within Asia highlight the importance of evidence-based solutions that target and overcome specific local barriers to hypertension treatment and control.

## OUT-OF-OFFICE BP-GUIDED HYPERTENSION MANAGEMENT

Hypertension is not a simple disease that is similar between patients. Instead, there are different hypertension phenotypes, and times and triggers for elevated BP. These include morning, daytime, nocturnal and stress-induced hypertension.

An essential tool in this context is out-of-office BP measurement, including HBPM and 24-h ambulatory BP monitoring (ABPM), which has been recognized and recommended in the Asian region.<sup>7,8</sup> However, as documented in the Asia BP@Home study, which was conducted

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at 15 specialist hypertension centers in 11 Asian countries/regions and utilized the same validated HBPM device, current approaches result in variable BP control rates in the region (from 36% to 84%).<sup>9</sup> Additional data from the AsiaBP@Home study also showed significant differences in office and home resting heart rates between East, South East, and South Asia regions, and the types of antihypertensive medication used also varied between regions.<sup>10</sup> Thus, there is room for improvement in rates of morning BP control in Asia, and the key will be tailored specific strategies based on the specific hypertension profile and challenges in each country/region. For example, the Taiwan HBPM treatment guideline published in 2020 is very innovative and informative, and can serve as a reference for conducting thorough home BP-guided hypertension management in clinical practice.<sup>11</sup> Documents from the HOPE Asia Network can also be used to help guide local clinical practice in Asian countries/regions.<sup>8,12</sup> In addition, it is good to see the publication of local hypertension guidelines for Vietnam and Thailand in this issue.

## SEVEN ACTION APPROACHES

The most recent HOPE Asia network publication outlines seven action approaches for the management of hypertension in Asia.<sup>13</sup> This includes specifically targeting the Asia-specific features of hypertension, including salt sensitivity and having morning home BP as the first target for BP reductions (followed by nighttime BP).<sup>13</sup> Of these, morning hypertension (including exaggerated morning BP surge) and nocturnal hypertension are more common in Asians compared with other populations.<sup>14,15</sup> The BP level prior to morning antihypertensive dosing is the most difficult to control and is strongly associated with the risk of stroke, coronary artery disease and organ damage.<sup>16</sup> This emphasizes the region-specific importance of strategies to identify and control morning hypertension.<sup>17,18</sup>

Other actions include widespread screening, use of a home BP-guided strategy, choosing the most appropriate antihypertensive agent(s), strict BP control and utilizing telemedicine.<sup>13</sup>

## NEXT STEPS

The important next step is to determine how to integrate these core principles and messages into administrative planning and clinical practice in each Asian country/region. The diverse hypertension-related topics covered by papers in this Asia-specific issue of *Journal of Clinical Hypertension* make an important contribution towards this goal. We hope that readers of the journal will gain knowledge and continue to work with us to decrease the rate and impact of cardiovascular disease through better management of hypertension.

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