

## Research Article



# Korea Hypertension Fact Sheet 2024: nationwide population-based analysis with a focus on young adults

Hyeon Chang Kim <sup>1,2\*</sup>, Hokyoo Lee <sup>1,2</sup>, Hyeok-Hee Lee <sup>1,2</sup>, Song Vogue Ahn <sup>3</sup>, Ju-Mi Lee <sup>4</sup>, Dae Young Cheon <sup>5</sup>, Jong Hyun Jhee <sup>6</sup>, Minjae Yoon <sup>7</sup>, Min-Ho Shin <sup>8</sup>, JoonNyung Heo <sup>9</sup>, Eunji Kim <sup>10</sup>, Seung Won Lee <sup>11</sup>, Jaeyong Lee <sup>1</sup>, Yeon Woo Oh <sup>1</sup>, Joeeun Jeon <sup>1</sup>, Minsung Cho <sup>12</sup>, Dasom Son <sup>12</sup>, Na Yeon Ahn <sup>12</sup>, and for the Korean Society of Hypertension (KSH) – Hypertension Epidemiology Research Working Group

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### \*Correspondence:

**Hyeon Chang Kim**

Department of Preventive Medicine, Yonsei University College of Medicine and Institute for Innovation in Digital Healthcare, Yonsei University Health System, 50 Yonsei-ro, Seodaemun-gu, Seoul 03722, Republic of Korea.

Email: hckim@yuhs.ac

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### ORCID iDs

Hyeon Chang Kim

<https://orcid.org/0000-0001-7867-1240>

Hokyoo Lee

<https://orcid.org/0000-0002-5034-8422>

Hyeok-Hee Lee

<https://orcid.org/0000-0002-2895-6835>

Song Vogue Ahn

<https://orcid.org/0000-0002-2771-6792>

Ju-Mi Lee

<https://orcid.org/0000-0002-1984-1710>

Dae Young Cheon

<https://orcid.org/0000-0001-6713-4300>

Jong Hyun Jhee

<https://orcid.org/0000-0002-1255-1323>

Minjae Yoon

<https://orcid.org/0000-0003-4209-655X>

<sup>1</sup>Department of Preventive Medicine, Yonsei University College of Medicine, Seoul, Republic of Korea

<sup>2</sup>Institute for Innovation in Digital Healthcare, Yonsei University Health System, Seoul, Republic of Korea

<sup>3</sup>Department of Health Convergence, Ewha Womans University, Seoul, Republic of Korea

<sup>4</sup>Department of Preventive Medicine, Chungnam National University College of Medicine, Daejeon, Republic of Korea

<sup>5</sup>Division of Cardiology, Department of Internal Medicine, Hallym University Dongtan Sacred Heart Hospital, Hwaseong, Republic of Korea

<sup>6</sup>Division of Nephrology, Department of Internal Medicine, Gangnam Severance Hospital, Yonsei University College of Medicine, Seoul, Republic of Korea

<sup>7</sup>Division of Cardiology, Department of Internal Medicine, Seoul National University Bundang Hospital, Seoul National University College of Medicine, Seongnam, Republic of Korea

<sup>8</sup>Department of Preventive Medicine, Chonnam National University Medical School, Hwasun, Republic of Korea

<sup>9</sup>Department of Neurology, Chung-Ang University Gwangmyeong Hospital, Gwangmyeong, Republic of Korea

<sup>10</sup>Department of Preventive Medicine, Gachon University College of Medicine, Incheon, Republic of Korea

<sup>11</sup>Institute of Immunology and Immunological Disease, Yonsei University College of Medicine, Seoul, Republic of Korea

<sup>12</sup>Department of Public Health, Yonsei University Graduate School, Seoul, Republic of Korea

## ABSTRACT

**Background:** This report provides an overview of hypertension prevalence, management, and trends in South Korea.

**Methods:** The analysis is based on data from Korean adults aged 20 and older, using the 1998–2022 Korea National Health and Nutrition Examination Survey (KNHANES) and the 2002–2022 National Health Insurance (NHI) Big Data.

**Results:** An estimated 30% of Korean adults (13 million) have hypertension, including 7.2 million men, 5.8 million women, and 5.8 million aged 65 or older. Overall awareness, treatment, and control rates were 77%, 74%, and 59%, respectively, showing a tendency to increase with advancing age. Medical utilization for hypertension has steadily increased, with 11.5 million patients accessing medical services, 10.9 million receiving antihypertensive prescriptions, and 8.1 million undergoing continuous treatment in 2022. Prescription patterns reveal monotherapy (40%), dual therapy (44%), and combination therapy with three or more drugs (16%). The most commonly prescribed antihypertensive medications include angiotensin receptor blockers (76%), calcium channel blockers (62%), diuretics (23%), and beta-blockers (15%). Among young adults aged 20–39 with hypertension, 59.2% do not utilize healthcare services, and 84.9% are non-adherent to treatment. Awareness (36%), treatment (35%), and control rates (33%) in this group are notably lower than all age groups

Min-Ho Shin   
<https://orcid.org/0000-0002-2217-5624>  
JoonNyung Heo   
<https://orcid.org/0000-0001-6287-6348>  
Eunji Kim   
<https://orcid.org/0000-0002-1306-4105>  
Seung Won Lee   
<https://orcid.org/0000-0002-9562-2544>  
Jaeyong Lee   
<https://orcid.org/0009-0004-9039-4257>  
Yeon Woo Oh   
<https://orcid.org/0009-0002-2485-1400>  
Jooeun Jeon   
<https://orcid.org/0000-0001-7284-3793>  
Minsung Cho   
<https://orcid.org/0009-0002-4496-8489>  
Dasom Son   
<https://orcid.org/0009-0004-1491-1937>  
Na Yeon Ahn   
<https://orcid.org/0009-0007-6689-6195>

### Abbreviations

ACEi, angiotensin-converting enzyme inhibitor; ARB, angiotensin receptor blocker; BB, beta-blocker; BP, blood pressure; CCB, calcium channel blocker; DBP, diastolic blood pressure; DU, diuretic; ICD-10, International Classification of Diseases, 10th Revision; KNHANES, Korea National Health and Nutrition Examination Survey; NHI, National Health Insurance; PSD, potassium-sparing diuretic; SBP, systolic blood pressure.

### Consortium

The Korean Society Hypertension–Hypertension Epidemiology Research Working Group. Hyeon Chang Kim, Song Vogue Ahn, Hokyou Lee, Ju Mi Lee, Dae Young Cheon, Jong Hyun Jhee, Minjae Yoon, Min-Ho Shin, JoonNyung Heo, Hyeok-Hee Lee, Eunji Kim, Seung Won Lee, Jong Ku Park, Il Suh, and Tae-Yong Lee.

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### Competing interest

The authors declare that they have no competing interests.

of above 40, with treatment continuity rates at 24% for individuals in their 20s and 40% for those in their 30s.

**Conclusions:** While South Korea has achieved relatively high rates of hypertension management compared to many countries, further efforts are needed to reduce hypertension prevalence and improve awareness and treatment adherence, particularly among younger adults.

**Keywords:** Hypertension; Prevalence; Awareness; Therapeutics; Korea

## BACKGROUND

Hypertension, or elevated blood pressure (BP), is a medical condition that significantly increases the risks of heart, brain, kidney and other diseases. Hypertension is a major cause of premature death worldwide [1,2]. It is estimated that the number of people with hypertension doubled from 648 million in 1990 to 1,278 million in 2019, and only 38% of male hypertension patients and 47% of female hypertension patients are diagnosed and treated [3]. While the cardiovascular disease mortality rate has been decreasing in Korea, heart disease, cerebrovascular disease, and hypertension remain the second, fourth, and eighth leading causes of death, respectively [4]. Moreover, due to the rapid aging of the population, the absolute number of people with hypertension and cardiovascular disease is expected to increase [5]. In South Korea, individuals with hypertension face a substantial financial burden, spending an additional 545,489 won (approximately \$450) per year on healthcare compared to those without hypertension. This contributes to an estimated annual national healthcare expenditure of about 5 trillion won (approximately \$4.2 billion) due to hypertension, underscoring the importance of early BP management to reduce lifelong healthcare costs [6]. Controlling BP is crucial not only to reduce the burden of disease at a societal level but also to improve the quality of life at an individual level. Continuous monitoring of hypertension prevalence and management status should be the first step in reducing its burden. To achieve this, the Korean Society of Hypertension had published its first Hypertension Fact Sheet in 2018, and have been periodically updating it thereafter [7-11].

## METHODS

### Study populations

This report is based on two nationally representative datasets: the Korea National Health and Nutrition Examination Survey (KNHANES) and the National Health Insurance (NHI) Big Data. The KNHANES, established in 1998, is a national surveillance system designed to assess the health and nutritional status of the noninstitutionalized Korean population [12,13]. The NHI Big Data, organized by the National Health Insurance Service, covers socio-demographics, hospital claims, International Classification of Diseases, 10th Revision (ICD-10, I10) codes, and mortality data for the entire population of South Korea from 2002 to 2022 [14]. In previous iterations of the Korea Hypertension Fact Sheet, such as the 2018 report, the KNHANES dataset was analyzed for adults aged 30 years and older, while the NHI Big Data included individuals of all ages. Since the 2020 report, both KNHANES and NHI Big Data have been analyzed for adults aged 20 years and older. [8]. These two complementary datasets allow for a robust examination of hypertension trends, covering both population-representative health surveillance data (KNHANES) and comprehensive healthcare utilization records (NHI Big Data).

#### Availability of data and materials

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

#### Ethics approval and consent to participate

The study protocol was approved by the Institutional Review Board of Yonsei University Health System, Seoul, Korea (approval 4-2024-0519). Informed consent was waived, because this is a retrospective study of deidentified, routinely collected data.

#### Consent for publication

Not applicable.

#### Authors' contributions

Conceptualization: Kim HC, Lee H; Data curation: Kim HC, Lee H; Formal analysis: Kim HC, Lee H, Lee HH, Ahn SV, Lee JM, Cheon DY, Jhee JH, Yoon M, Shin MH, Heo J, Kim E, Lee SW, Lee J, Oh YW, Jeon J, Cho M, Son D, Ahn NY; Investigation: Kim HC, Lee H, Lee HH, Ahn SV, Lee JM, Cheon DY, Jhee JH, Yoon M, Shin MH, Heo J, Kim E, Lee SW, Lee J, Oh YW, Jeon J, Cho M, Son D, Ahn NY; Methodology: Kim HC, Lee H; Writing - original draft: Kim HC, Lee H; Writing - review & editing: Lee HH, Ahn SV, Lee JM, Cheon DY, Jhee JH, Yoon M, Shin MH, Heo J, Kim E, Lee SW, Lee J, Oh YW, Jeon J, Cho M, Son D, Ahn NY.

#### Analysis of the KNHANES from 1998 to 2022

There have been nine rounds of KNHANES between 1998 and 2018: KNHANES I (1998), KNHANES II (2001), KNHANES III (2005), KNHANES-IV (2007–2009), KNHANES V (2010–2012), KNHANES VI (2013–2015), KNHANES VII (2016–2018), KNHANES VIII (2019–2021), and KNHANES IX (2022–2024). However, only the first-year data of the 9th round were available for this report. Hypertension was defined as systolic blood pressure (SBP)  $\geq 140$  mmHg, diastolic blood pressure (DBP)  $\geq 90$  mmHg [15], or self-reported use of antihypertensive medication for the purpose of BP control. Awareness rate was defined as the proportion of people with physician diagnosis of hypertension among all people with hypertension. Treatment rate was defined as the proportion of people using antihypertensive drugs for 20 days or more per month among all people with hypertension. Control rate was defined as the proportion of people with SBP  $< 140$  mmHg and DBP  $< 90$  mmHg among all people with hypertension and people treated for hypertension [16]. To evaluate the magnitude and management status of hypertension without the effects of population aging, age-standardized rates were calculated based on the demographics of the Korean population in 2005 according to the Population and Housing Census, Statistics Korea. To take into account the effect on estimator variance attributable to the KNHANES' stratified multistage clustered probability sampling design, we applied survey sampling weights to all the analyses.

#### Analysis of the NHI Big Data from 2002 to 2022

While the KNHANES data analysis defined hypertension based on measured BP levels and use of antihypertensive medication, the NHI Big Data analysis defined hypertension based on diagnosis codes, because the claim database did not have records of BP measurements. Healthcare utilization was defined as at least one health insurance claim for diagnosis of essential hypertension (I10) each year. Treatment of hypertension was defined as at least one health insurance claim for hypertension diagnosis with antihypertensive drug prescription each year. Adherence to treatment was defined as receiving prescriptions of antihypertensive drugs  $\geq 290$  days (80%) each year. Antihypertensive drugs were classified into angiotensin receptor blocker (ARB), angiotensin converting enzyme inhibitor (ACEi), calcium channel blocker (CCB), diuretic (DU; thiazide and related diuretics, loop diuretics), beta-blocker (BB), potassium-sparing diuretic (PSD), or others (alpha-blockers, vasodilators, etc.) The classification of prescribed antihypertensive regimens was determined by the number and types of antihypertensive drug classes included in the prescription, regardless of whether medications were in a single-pill combination or multiple-pill regimen. If the regimen of antihypertensive drug had switched in a year, one with the longest duration was selected as the representative prescription of the patient for the given year. The estimated hypertension burden and management status were additionally calculated for young adults aged 20–39 years.

## RESULTS

#### Trends of average BP and hypertension prevalence

The average BP of Korean adults demonstrated a significant decline between 1998 and 2008, stabilizing thereafter. In 2022, the mean SBP/DBP of the population was recorded at 119/74 mmHg among adults aged 20 years and older, and 120/75 mmHg among those aged 30 years and older (page 6 of **Supplementary Data 1**). This reduction was particularly notable with greater decreases observed in older age groups, as SBP declined by 14.6 mmHg in individuals aged 65 years and older, 9.8 mmHg in those aged 40–64 years, and 5.8 mmHg

**Table 1.** Crude and age-standardized prevalence of hypertension, 1998–2022

Year	Crude prevalence of hypertension (%)						Age-standardized prevalence of hypertension (%) <sup>a</sup>					
	Adults aged 20 years or older			Adults aged 30 years or older			Adults aged 20 years or older			Adults aged 30 years or older		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
1998	25.1	28.5	22.1	29.7	32.0	27.6	26.0	29.6	22.3	30.7	33.4	27.4
2001	26.0	30.7	22.7	29.8	34.4	26.6	23.6	28.4	20.2	28.5	33.1	25.3
2005	22.9	25.5	20.4	28.1	30.9	25.4	22.7	26.1	18.9	28.0	31.5	23.8
2007	20.4	21.5	19.3	25.0	26.4	23.7	19.7	21.7	17.3	24.4	26.7	21.5
2008	22.7	23.5	21.9	27.6	28.5	26.6	21.4	23.2	19.1	26.5	28.5	24.0
2009	23.4	25.9	20.9	28.2	31.2	25.3	21.4	25.2	17.4	26.5	30.8	21.9
2010	24.1	25.3	23.0	28.9	30.1	27.7	21.7	24.1	18.8	26.8	29.3	23.8
2011	26.5	29.8	23.3	30.8	33.9	27.8	23.9	28.6	18.8	28.4	32.8	23.6
2012	26.7	28.4	25.1	31.5	33.3	29.8	23.8	26.9	20.3	28.9	32.1	25.2
2013	25.7	28.9	22.8	30.4	34.2	26.9	22.4	26.9	17.7	27.2	32.4	22.1
2014	24.3	26.4	22.2	28.9	31.8	26.2	20.5	24.1	16.6	25.4	29.7	20.9
2015	27.0	29.5	24.5	32.0	35.1	29.1	22.5	26.7	18.2	27.8	32.6	22.9
2016	28.5	31.9	25.1	33.5	37.7	29.4	23.7	28.6	18.4	29.1	35.0	22.9
2017	26.9	30.4	23.5	31.2	35.0	27.6	22.3	27.4	16.9	26.9	32.3	21.3
2018	28.8	31.5	26.0	33.3	36.4	30.4	23.5	28.0	18.6	28.3	33.2	23.1
2019	28.4	29.7	27.0	32.9	34.7	31.2	22.5	25.9	18.8	27.2	31.1	22.8
2020	29.4	33.5	25.4	34.2	38.9	29.7	23.3	29.1	17.0	28.3	34.9	21.3
2021	28.4	30.4	26.4	33.2	35.8	30.7	21.8	25.7	17.4	26.8	31.5	21.7
2022	30.1	33.4	26.8	34.8	38.5	31.2	22.4	27.3	17.2	27.3	32.8	21.5

<sup>a</sup>Age-standardized prevalence was calculated using the 2005 population projections for Korea.

in those aged 20–39 years from 1998 to 2022 (page 7 of **Supplementary Data 1**). The crude prevalence of hypertension among adults aged 20 years and older rose from 25.1% (men 28.5%, women 22.1%) in 1998 to 30.1% (men 33.4%, women 26.8%) in 2022. In contrast, the age-standardized prevalence decreased modestly over the same period, from 26.0% (men 29.6%, women 22.3%) in 1998 to 22.4% (men 27.3%, women 17.2%) in 2022 (**Table 1**, page 8 of **Supplementary Data 1**). However, population aging has resulted in a steady increase in the absolute number of individuals with hypertension. In 2022, an estimated 13 million Korean adults had hypertension, comprising 7.2 million men, 5.8 million women, and 5.8 million individuals aged 65 years or older. Notably, the number of elderly women with hypertension has been rising rapidly; by 2022, women aged 65 years and older accounted for one-quarter of all hypertension cases (page 9–10 of **Supplementary Data 1**).

### Trends of hypertension management

Significant progress has been made in hypertension management over the past 25 years, including improvements in awareness, treatment, and control rates. By 2022, the rates among adults aged 20 and older with hypertension had reached 77.2% for awareness, 74.1% for treatment, and 58.6% for control. Nonetheless, management levels differ significantly by age group. While all management indicators have shown substantial improvement in older adults, advancements have been more limited among younger adults. Specifically, among individuals under 40 with hypertension, awareness, treatment, and control rates remain notably low. Encouragingly, recent trends indicate an increase in awareness, treatment, and control rates among younger adults, though they are still well below 50% (page 12–14 of **Supplementary Data 1**). Interestingly, among those on medication, control rates are high even in younger adults, suggesting that low control rates in younger adults are largely due to limited awareness and lack of treatment (page 15 of **Supplementary Data 1**). Furthermore, average BP levels for both all hypertensive individuals and those undergoing treatment have steadily declined, with older adults showing faster declines, while reductions in younger adults have been slower (**Table 2**, page 16–17 of **Supplementary Data 1**).

**Table 2.** The average blood pressure levels among people with hypertension and people treated for hypertension, 1998–2022

Year	Average systolic blood pressure (mmHg)						Average diastolic blood pressure (mmHg)					
	People with hypertension			People treated for hypertension			People with hypertension			People treated for hypertension		
	Age 20–39	Age 40–64	Age 65+	Age 20–39	Age 40–64	Age 65+	Age 20–39	Age 40–64	Age 65+	Age 20–39	Age 40–64	Age 65+
1998	139.6	148.4	159.5	139.1	148.0	160.4	93.8	92.7	85.7	91.2	91.3	85.8
2001	137.6	144.9	151.4	148.1	142.9	146.6	93.2	90.8	84.5	92.8	88.6	82.3
2005	130.7	137.5	143.7	125.2	132.9	138.7	93.7	90.2	82.1	82.4	85.4	79.6
2007–2009	132.7	133.9	137.3	128.3	128.6	132.6	94.0	87.7	78.3	87.0	82.7	76.4
2010–2012	133.5	135.1	136.1	125.4	128.6	132.8	94.0	86.9	75.1	85.5	81.2	73.6
2013–2015	134.6	132.8	134.0	125.6	126.3	130.6	94.4	85.9	73.0	84.4	80.8	71.4
2016–2018	132.9	132.2	134.0	121.4	125.7	130.9	93.3	85.9	73.0	82.2	80.6	71.4
2019–2021	135.5	131.6	134.7	125.7	125.0	131.6	92.7	85.1	74.1	82.0	80.2	72.7
2022	133.0	130.1	133.4	125.2	123.6	130.8	88.3	83.8	74.8	76.8	79.0	73.3

### Healthcare utilization for hypertension

The number of people diagnosed with hypertension in South Korea has increased nearly fourfold, from 3 million in 2002 to 11.5 million in 2022. Similarly, the number of individuals receiving antihypertensive prescriptions rose more than fourfold, from 2.5 million in 2002 to 10.9 million in 2022. More significantly, adherence to antihypertensive medication has shown a substantial increase, with adherent individuals growing about 13-fold from 0.6 million in 2002 to 8.1 million in 2022 (page 19 of **Supplementary Data 1**). The use of combination therapy has also risen, with 39.7% of patients using one class of antihypertensive drug, 43.8% using two classes, and 16.5% using three or more classes in 2022 (**Table 3**, page 21 of **Supplementary Data 1**). The most commonly prescribed antihypertensive drug class was ARB (76.1%), followed by CCB (62.1%), DU (22.5%), BB (15.2%), PSD (1.9%), and ACEi (1.2%) (page 22 of **Supplementary Data 1**). For monotherapy, ARB (53.3%) and CCB (35.4%) were the most frequently prescribed, while the ACEi/ARB plus CCB combination (69.9%) emerged as the most common dual therapy regimen (page 25 of **Supplementary Data 1**).

**Table 3.** Trends of antihypertensive medication use, 2002–2022

Year	Treated total	Monotherapy		Dual therapy		3 classes or more	
	Number (×1,000)	Number (×1,000)	Percent	Number (×1,000)	Percent	Number (×1,000)	Percent
2002	2,523	1,434	56.9	785	31.1	303	12.0
2003	3,213	1,669	52.0	1,088	33.9	456	14.2
2004	3,720	1,794	48.2	1,321	35.5	606	16.3
2005	4,468	2,045	45.8	1,624	36.3	799	17.9
2006	4,993	2,201	44.1	1,831	36.7	961	19.2
2007	5,398	2,338	43.3	1,973	36.6	1,087	20.1
2008	5,770	2,454	42.5	2,121	36.8	1,194	20.7
2009	6,182	2,536	41.0	2,352	38.0	1,294	20.9
2010	6,538	2,578	39.4	2,555	39.1	1,405	21.5
2011	6,772	2,627	38.8	2,721	40.2	1,424	21.0
2012	7,220	2,815	39.0	2,931	40.6	1,474	20.4
2013	7,499	2,965	39.5	3,078	41.0	1,456	19.4
2014	7,696	3,111	40.4	3,211	41.7	1,374	17.9
2015	7,944	3,251	40.9	3,334	42.0	1,359	17.1
2016	8,297	3,409	41.1	3,516	42.4	1,372	16.5
2017	8,633	3,534	40.9	3,710	43.0	1,389	16.1
2018	9,027	3,672	40.7	3,905	43.3	1,450	16.1
2019	9,512	3,865	40.6	4,127	43.4	1,520	16.0
2020	9,914	3,975	40.1	4,327	43.6	1,612	16.3
2021	10,455	4,161	39.8	4,579	43.8	1,714	16.4
2022	10,889	4,324	39.7	4,774	43.8	1,791	16.5



**Table 4.** Trends of awareness, treatment and control rates by age group, 1998–2022

Year	Awareness rate (%)				Treatment rate (%)				Control rate (%)			
	Age 20–39	Age 40–49	Age 50–64	Age 65+	Age 20–39	Age 40–49	Age 50–64	Age 65+	Age 20–39	Age 40–49	Age 50–64	Age 65+
1998	7.2	21.4	31.2	33.4	8.8	21.5	31.6	32.8	2.4	7.3	9.3	6.6
2001	7.1	19.7	37.9	48.7	8.0	21.0	39.9	50.8	3.1	5.9	14.2	16.6
2005	8.2	27.6	58.1	65.7	14.5	37.0	66.1	71.5	6.3	14.9	33.7	33.5
2007–2009	15.1	38.5	67.7	74.9	25.5	47.1	73.1	79.0	9.7	27.6	47.9	51.2
2010–2012	10.1	34.2	62.7	80.9	17.4	41.4	68.7	83.9	6.5	24.3	44.9	55.6
2013–2015	11.8	39.5	62.9	82.5	17.6	43.9	67.3	85.2	7.8	29.8	45.4	60.0
2016–2018	13.7	38.2	67.3	83.1	17.4	44.8	71.4	85.8	10.5	29.1	50.5	60.4
2019–2021	16.9	44.5	68.5	83.0	23.4	50.7	73.6	85.6	13.2	35.2	54.3	59.4
2022	34.7	50.2	72.6	87.9	35.7	57.4	75.8	90.0	32.9	45.7	57.9	66.5

### Management of hypertension in young adults

Based on the 2022 KNHANES data, it is estimated that approximately 894,000 young adults aged 20–39 and 1.6 million adults aged 40–49 in Korea have hypertension. These groups represent approximately 6.9% and 12.5% of the total 13 million adults with hypertension, respectively. Prehypertension is more prevalent in younger adults, with an estimated 1.6 million individuals aged 20–39 (accounting for 24.2%) and 1.5 million individuals aged 40–49 (accounting for 22.9%) of the prehypertensive population.

Among young adults aged 20–39 with hypertension, 59.2% do not utilize healthcare services, and 84.9% are non-adherent to treatment (page 27 of **Supplementary Data 1**). While the proportion of hypertensive patients achieving BP control has increased significantly among older and middle-aged adults, only 32.9% of those aged 20–39 managed to control their hypertension in 2022, despite an improvement from 13.2% observed during 2019–2021 (page 28 of **Supplementary Data 1**). Although awareness, treatment, and control rates among young adults aged 20–39 with hypertension have shown improvements compared to previous years, they remain substantially lower than those in older age groups (**Table 4**, page 29–32 of **Supplementary Data 1**). Additionally, younger hypertensive patients tend to show lower rates of treatment adherence over time even after initiating treatment, compared to older age groups (page 33–34 of **Supplementary Data 1**).

## DISCUSSION

The Korea Hypertension Fact Sheet 2024 provides a comprehensive overview of hypertension prevalence and management trends in Korea, with a special focus on hypertension among younger adults. Despite limited changes in population average BP and hypertension prevalence over the past decade, the number of individuals with hypertension has continued to rise, now surpassing 13 million, primarily due to population aging. In the 1990s, only a small fraction of hypertensive individuals received adequate treatment; however, over the past 3 decades, Korea's hypertension management has advanced remarkably. Currently, 11.5 million hypertensive individuals utilize healthcare services, 10.9 million receive antihypertensive prescriptions, and 8.1 million adhere to ongoing treatment. South Korea is now recognized globally as a leader in hypertension management, with awareness, treatment, and control rates among the highest worldwide. The country has achieved one of the largest reductions in average BP, and age-standardized mortality rates from cardiovascular and cerebrovascular diseases have decreased by nearly 80% over the past three decades—attributed largely to successful BP control. The World Health Organization Global Report on Hypertension also highlights South Korea as a model for effective hypertension management [17,18].

Like many other countries, South Korea has historically experienced low hypertension awareness, treatment, and control rates among younger adults, with these gaps appearing more pronounced given the rapid improvements in hypertension management among older adults. In recent years, hypertension awareness and treatment rates have begun to rise among individuals in their 20s and 30s, though they remain lower than in older age groups. Korea's national health checkup program previously targeted employed individuals and adults aged 40 and above, but its expansion in 2019 to include unemployed adults aged 20–39 may have contributed to improved hypertension awareness and treatment rates in younger adults [19]. Sustaining and advancing hypertension management requires prioritizing early detection and treatment initiation particularly among younger adults, who continue to demonstrate relatively lower awareness, treatment, and control rates. Supporting treatment adherence and consistent BP control is essential to minimizing hypertension-related complications and mortality. Furthermore, prevention and management strategies tailored to varying socio-demographics will be crucial for continued improvement, addressing the specific needs across age and risk groups.

The most significant aspect of the Korea Hypertension Fact Sheet is its broad applicability, leveraging two robust data sources. The KNHANES provides an unbiased representation of the Korean population, while the NHI Big Data encompasses medical service utilization for the entire population. However, several limitations should be acknowledged to contextualize the findings. First, the KNHANES is limited to non-institutionalized residents, potentially excluding individuals with severe illnesses who may not be represented in the survey. Second, despite adherence to standardized protocols and rigorous quality control, variations in data collection methods and survey details across different KNHANES waves may have influenced the consistency of trend analyses over time. Third, the NHI Big Data, primarily intended for claims and reimbursement purposes, may not be ideal for accurately estimating disease occurrence and prevalence. Additionally, the use of the I10 code as the operational definition for hypertension, while ensuring consistency across Fact Sheet editions, may not adequately capture cases involving hypertensive complications or organ damage, particularly among older adults. Fourth, adherence to antihypertensive medication was assessed based on prescription records, which may overestimate actual adherence as it does not confirm whether patients consumed the prescribed medication. Lastly, the anonymization of data restricts the ability to link KNHANES and NHI datasets, limiting the potential for a more comprehensive analysis of population health and healthcare utilization patterns.

## CONCLUSIONS

South Korea is internationally recognized for its achievements in hypertension control, with significant reductions in age-standardized cardiovascular mortality over the past 30 years. However, the prevalence of hypertension has remained largely unchanged, and population aging continues to drive increases in the number of hypertensive individuals. Despite substantial advancements, gaps in hypertension management persist, particularly among younger adults, who exhibit lower rates of awareness, treatment, and control. Reducing the disease burden of hypertension will require strengthened primary prevention efforts, as well as early detection and treatment initiation, especially for younger populations. Emphasizing adherence to treatment is critical to controlling hypertension-related complications. Tailored prevention and management strategies that encompass diverse demographics will be essential for sustained progress in hypertension control and prevention.

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## SUPPLEMENTARY MATERIAL

### Supplementary Data 1

Korea Hypertension Fact Sheet 2024 published by the Korean Society of Hypertension

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