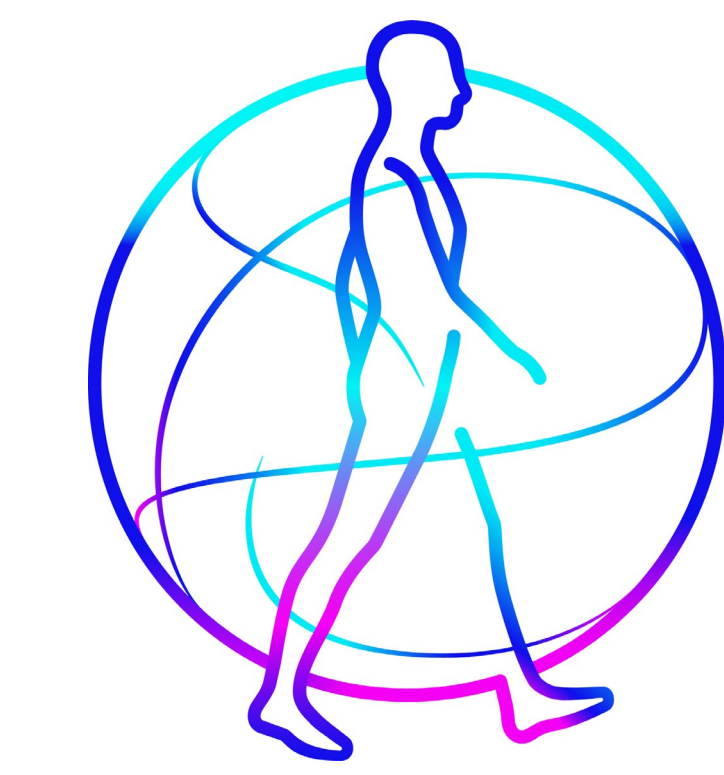


# When Hypertension Reaches the Hospital: Profiling Patients Admitted with Hypertension as a Primary Diagnosis in Chile's Public Sector

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## BACKGROUND & OBJECTIVE:

**Hypertension** is a highly prevalent chronic condition and a major upstream risk factor for cardiovascular, cerebrovascular, renal, and metabolic diseases. While its population-level prevalence is well documented, less is known about its **contribution to tertiary-care utilization** and in-hospital outcomes within public healthcare systems in Latin America. Understanding the clinical and utilization profile of hospitalized patients with hypertension is critical to inform **prevention strategies, care integration, and resource allocation** in settings with constrained healthcare capacity.

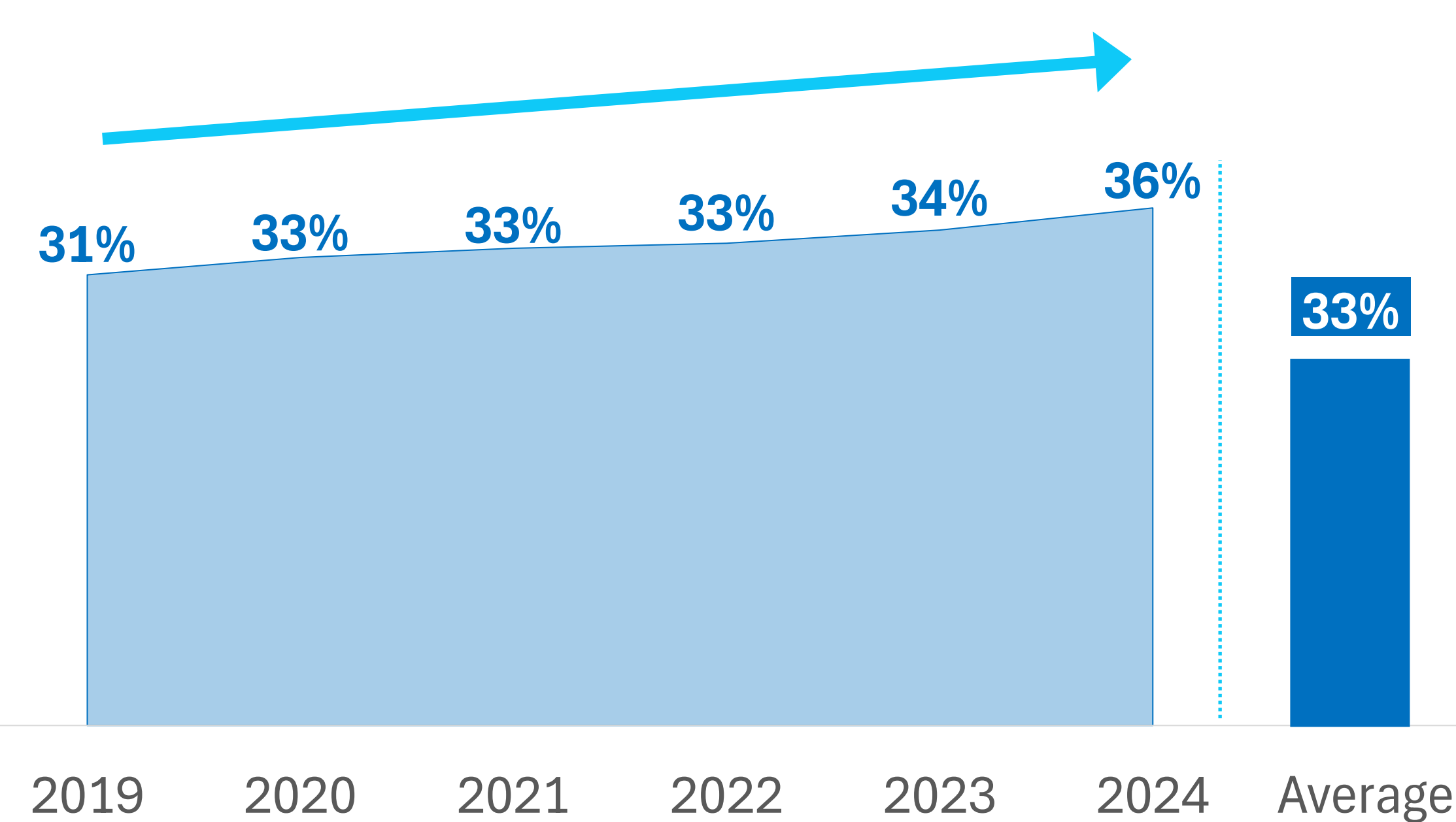
## METHODS:

This was a retrospective observational study using national **Diagnosis-Related Group (DRG)<sup>1</sup>** administrative data from the **Chilean public healthcare system (FONASA<sup>2</sup>)**, covering hospital discharges between **January 2019 and December 2024**. Adults **aged ≥18 years** with hypertension identified as a primary or secondary diagnosis using **ICD-10 codes (I10-I15)** were included. Patient demographics, primary discharge diagnoses, comorbidity burden, length of stay, readmissions, and in-hospital mortality were described using descriptive statistics.

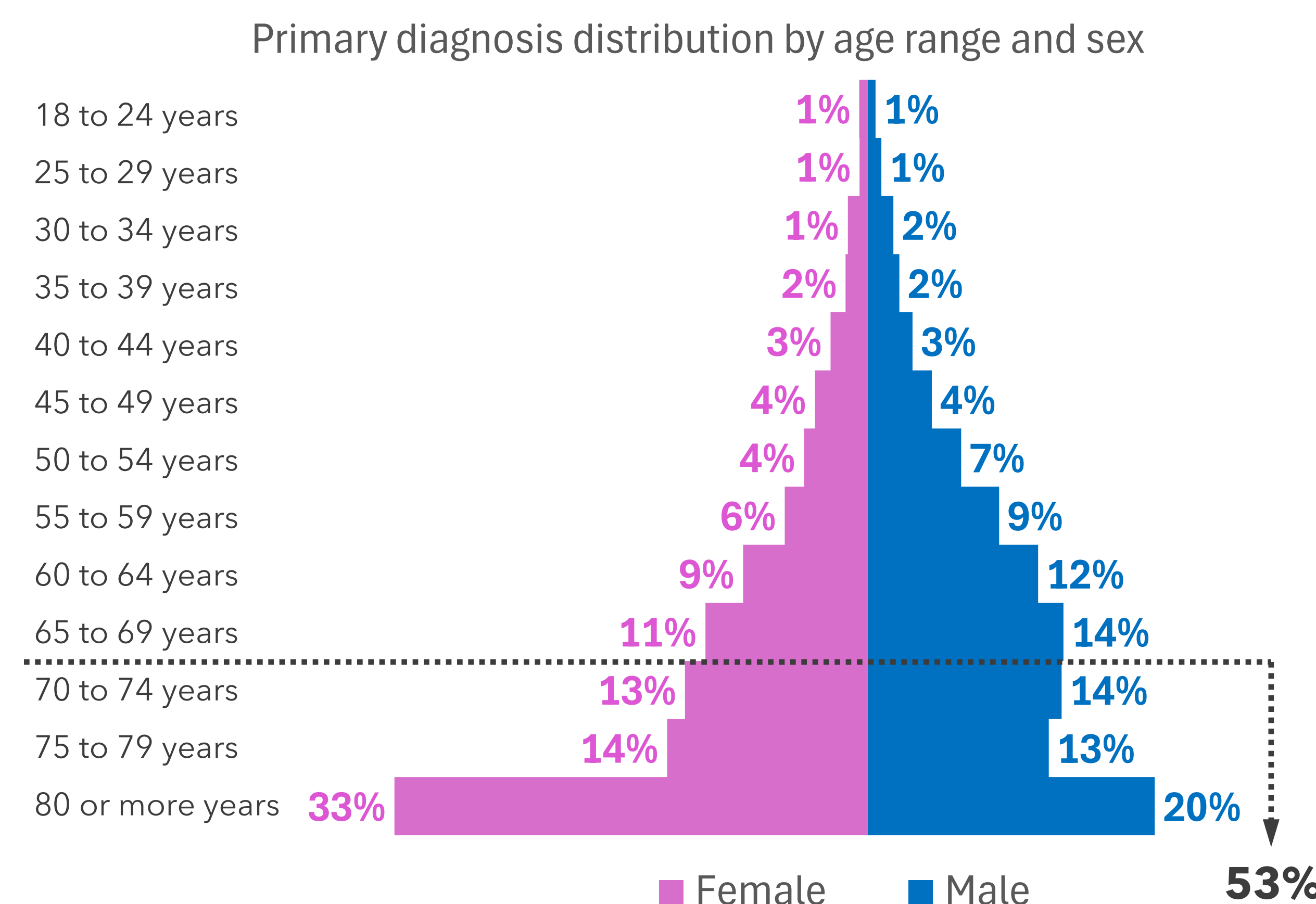
## RESULTS:

Among **3,359,824** hospitalizations in Chile (2019-2024), **33.0% (n=1,110,203)** had hypertension recorded as a primary or secondary diagnosis (i). A subset of **10,013 (0.9%) primary hypertension** diagnosis admissions was examined. Patients were predominantly elderly (mean age **69 years; 53% ≥70 years; 51% female**) (ii) with a mean length of stay (LOS) of 10 days, increasing to **12 days in major severe cases** (47%) (iii). Most grouped admissions were attributed to **hypertensive heart disease (39.4%)**, followed by essential hypertension (34.5%) and hypertensive heart and **kidney disease (18.4%)**, indicating a strong cardiovascular and cardiorenal profile. Comorbidity burden was high, particularly for **chronic kidney disease (9.4%), acute kidney failure (6.1%), and heart failure (6.0%)** (iv). Across the broader hospitalized cohort, patients demonstrated an elevated **in-hospital mortality (7.3%)** (v), especially in cardiorenal conditions, highlighting substantial clinical burden (vi). Overall, hypertension is associated with an elderly, high-severity, and multimorbid population, driving prolonged hospitalizations and significant healthcare burden.

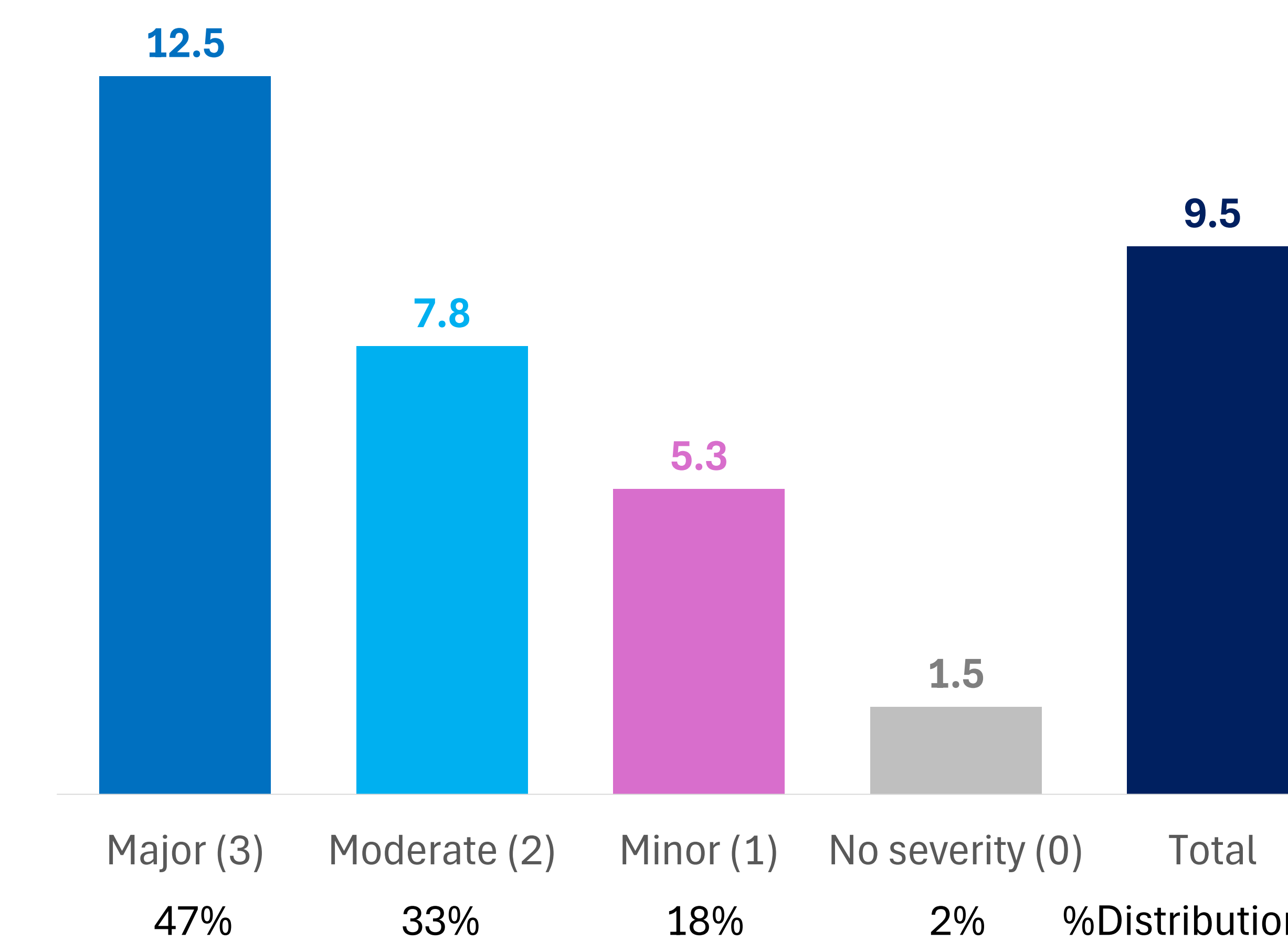
(i) Percentage of hospitalizations with reported hypertension



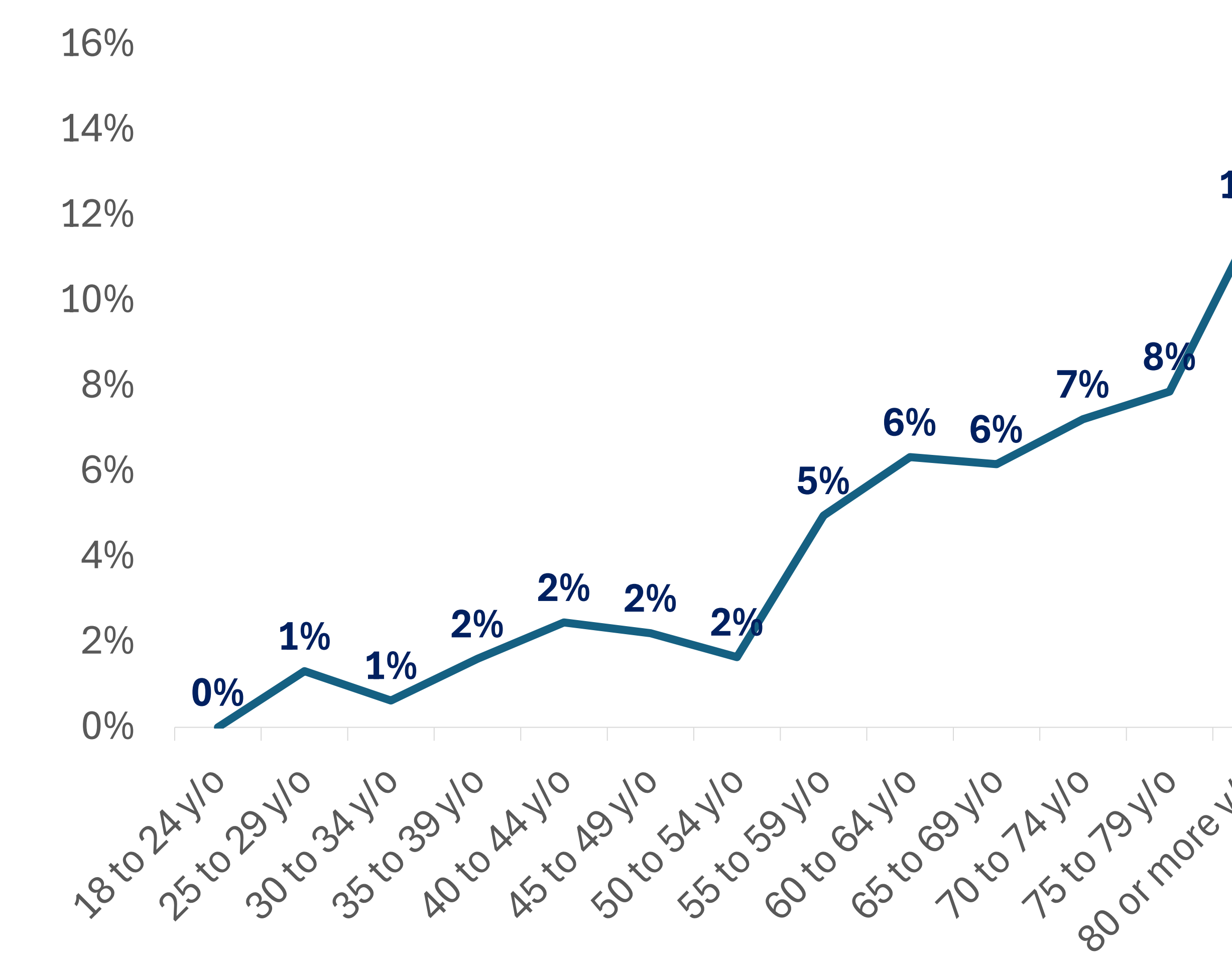
(ii) Primary diagnosis distribution by age range and sex



(iii) Average length of stay by severity, based on patients' comorbidities or complications, in days



(v) In-hospital mortality in patients with hypertension diagnosis across age groups



(iv) Associated comorbidities in patients by hypertension diagnosis

Diagnosis (ICD-10)	N	%
Chronic Kidney Disease (N18)	946	9.4%
Acute Renal Failure (N17)	612	6.1%
Heart Failure (I50)	603	6.0%
Diabetes Mellitus In Insulin Dependent (E11)	547	5.5%
Atrial fibrillation and flutter (I48)	545	5.4%
Chronic Ischemic Heart Disease (I25)	405	4.0%
Pulmonary edema (J81)	396	4.0%
Respiratory Failure, Not Classified (J96)	392	3.9%
Pleural Effusion Not Classified (J90)	290	2.9%
<b>Top diagnosis</b>	<b>4,736</b>	<b>47.3%</b>
<b>All diagnosis</b>	<b>10,013</b>	<b>100%</b>

(vi) In-hospital mortality by comorbidities in patients with hypertension diagnosis

Diagnosis (ICD-10)	N	%
Respiratory Failure, Not Classified (J96)	65	0.6%
Acute Renal Failure (N17)	60	0.6%
Heart Failure (I50)	60	0.6%
Chronic Kidney Disease (N18)	53	0.5%
Shock, Not Classified (R57)	49	0.5%
Atrial fibrillation and flutter (I48)	28	0.3%
Pleural Effusion Not Classified (J90)	26	0.3%
Chronic Ischemic Heart Disease (I25)	22	0.2%
Pulmonary edema (J81)	20	0.2%
Cardiomyopathy (I42)	19	0.2%
<b>Top diagnosis</b>	<b>402</b>	<b>4.0%</b>
<b>All categories</b>	<b>727</b>	<b>7.3%</b>

## DISCUSSION & CONCLUSIONS:

This study demonstrates that hypertension represents a substantial driver of hospitalization burden in Chile, affecting one-third of all admissions when considering primary and secondary diagnoses. Although a relatively small proportion of cases are admitted primarily due to hypertension (0.9%), these patients exhibit high clinical severity, prolonged length of stay, and elevated mortality, highlighting a disproportionate impact on healthcare resources. The predominance of cardiorenal conditions and advanced age profile highlights a multimorbid, high-risk population, reflecting progression to end-organ damage and increased resource utilization.

Hypertension drives high-burden hospitalizations in an elderly, multimorbid population, characterized by cardiorenal complications and elevated mortality. Improving early control and integrated care pathways represents a key opportunity to reduce clinical and economic burden.

Sources:  
 1/Catalogo de datos Fonasa - [https://public.tableau.com/views/Beneficiarios\\_16704273822880/Reporte?:showVizHome=no](https://public.tableau.com/views/Beneficiarios_16704273822880/Reporte?:showVizHome=no). Accessed on 04/28/2026.  
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