

Blood pressure control and complex health conditions in older adults: a challenge for hypertension management

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Introduction

- Guidelines advice to adapt hypertension management for older patients with **complex health conditions**
- These patients are subject to **unclear recommendations**

Objective

Assess the proportion of **complex health conditions** among participants with **elevated BP, and uncontrolled BP**.

Methods

- Data source: **Lausanne cohort Lc65+** (<https://lc65plus.iumsp.ch/>)
 - Analytical sample: 3210 participants, data collected between 2014 and 2016
 - Age: 67 to 80 years
- **Definitions of hypertension, and hypertension treatment:**
 - Hypertension: diagnosis by a physician (self-reported)
 - Hypertension treatment: use of antihypertensive treatment (self-reported)

• Definition of elevated and uncontrolled BP:

- Elevated BP: BP \geq 140/90 mmHg (measured)
- Uncontrolled BP: BP \geq 140/90 mmHg (measured) among treated individuals

• Definition of complex health conditions:

- Frailty: Fried's criteria (self-reported and measured), or
- Multimorbidity: 2 or more chronic diseases (self-reported), or
- Polypharmacy: 5 categories of medications at least once a week (self-reported)

Results

Table 1. Baseline characteristics of participants (n=3210)

Characteristics	%
Women	59
Age [years], mean (SD)	73.3 (4.1)
Systolic BP [mmHg], mean (SD)	135.1 (18.5)
Diastolic BP [mmHg], mean (SD)	76.3 (11.0)
Hypertension	51
Hypertension treatment	44
Elevated BP	39
Uncontrolled BP, among treated	56
Multimorbidity	48
Polypharmacy	21
Frailty	3.6

Values are % unless indicated otherwise. BP: blood pressure; SD: standard deviation

Table 2. Complex health conditions among participants with elevated BP and uncontrolled BP

	Complex health condition, % (95% CI)				
	Total n	Frail	Multimorbid	Polymedicated	Frail, multimorbid or polymedicated
Men					
• Elevated BP	611	2.6% (1.5-4.2)	47% (43-51)	21% (18-25)	50% (46-54)
• Uncontrolled BP	308	3.6% (1.8-6.4)	78% (73-83)	36% (30-42)	81% (76-85)
Women					
• Elevated BP	637	2.5% (1.4-4.1)	50% (46-54)	22% (19-25)	55% (51-58)
• Uncontrolled BP	309	2.6% (1.1-5.1)	74% (69-79)	34% (28-39)	77% (72-82)
All participants					
• Elevated BP	1248	2.6% (1.8-3.6)	49% (46-51)	22% (19-24)	52% (49-55)
• Uncontrolled BP	617	3.1% (1.9-4.9)	76% (73-80)	35% (31-39)	79% (76-82)

BP: blood pressure; n: number of participants

Discussion

- **Strengths:** Highly accurate BP measure
Population-based sample of older adults
- **Limitations:** Self-reported data
Potential selection bias
BP measured only three times at one visit

Conclusion

- High proportion of older adults with **hypertension and uncontrolled BP**
- **Complex health condition** in 1/2 of hypertensive and 3/4 of those treated but uncontrolled
- Hypertension management remains a serious **challenge** in many older adults
- Need for hypertension **trials** among older adults with complex health conditions

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