



Klinische inertie bij behandeling van hypertensie

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Klinische inertie

- Definitie: nalaten van aanpassing van behandeling ondanks bewijs dat verandering nodig is waardoor patiënten niet de optimale zorg ontvangen
- Schatting: verantwoordelijk voor 80% van cardiovasculaire ziekten
- CardioMonitor survey: ongeveer helft van ptn met hypertensie in USA en Europa niet goed ingesteld
- Slechts 15-38% adequate aanpassing van medicatie aanpassing



Redenen voor klinische inertie

Factoren gerelateerd aan

- Patiënt 29,3%
- Behandeling 56.1%
- Zorgsysteem 14,1%

Patiëntfactoren

Promoters related to patients

Patients denying having hypertension

Patients believing that hypertension is not a health condition that is serious enough to warrant pharmacotherapy

Patients resisting adoption of a lifestyle compatible with hypertension

Patients continuing to have low health literacy related to hypertension and associated comorbidities

Patients lacking exposure to or not receiving educational/awareness programs, campaigns, or advertisements

Patients who cannot afford the costs associated with pharmacotherapy

Patients who need to take more than 1 medication for managing hypertension

Patients experiencing adverse effects associated with pharmacotherapy for hypertension

Patients communicating poorly with their clinicians

Patients lacking trust in their clinicians and their recommendations

Behandelfactoren

Promoters related to clinicians	
1	Failure of clinicians to initiate antihypertensive pharmacotherapy
2	Failure of clinicians to titrate doses of antihypertensive medications to achieve pharmacotherapeutic goals
3	Failure of clinicians to recognize and manage comorbidities occurring along with hypertension
4	Patients dominating the clinical encounter with clinician
5	Clinicians lacking enough time to address/manage all health issues of patients with hypertension
6	Clinicians adopting a reactive instead of a proactive strategy in managing hypertension and its comorbidities
7	Clinicians overrating the quality of health care services already provided to patients with hypertension
8	Clinicians underestimating the proportion of patients with hypertension who need their pharmacotherapy to be intensified
9	Clinicians making soft excuses to avoid intensification of pharmacotherapy when it is needed
10	Clinicians blaming patients with hypertension for lack of adherence to the recommendations provided in previous encounters
11	Clinicians deciding that patients with hypertension would resist suggestions to intensifying pharmacotherapy without even asking the patients
12	Clinicians lacking relevant knowledge needed to support/promote active care of patients with hypertension
13	Clinicians lacking relevant tools needed to support/promote active care of patients with hypertension
14	Clinicians lacking relevant training needed to support/promote active care of patients with hypertension
15	Clinicians lacking relevant office systems needed to support/promote active care of patients with hypertension
16	Clinicians underestimating and/or not addressing risk factors of hypertension
17	Clinicians underestimating benefits of pharmacotherapy for patients with hypertension
18	Clinicians overestimating risks of adverse effects of pharmacotherapy for patients with hypertension
19	Clinicians lacking awareness of the current guidelines used in managing hypertension
20	Clinicians disagreeing with the current guidelines used in the management of hypertension
21	Clinicians disagreeing with the applicability of the current guidelines used in the management of hypertension

Zorgsysteem

Promoters related to the health care system

Absence of each of the following:

Current clinical guidelines used for managing hypertension

Decision support system

Active outreach system

Disease registry for hypertension

Visit planning system

Team approach in managing hypertension

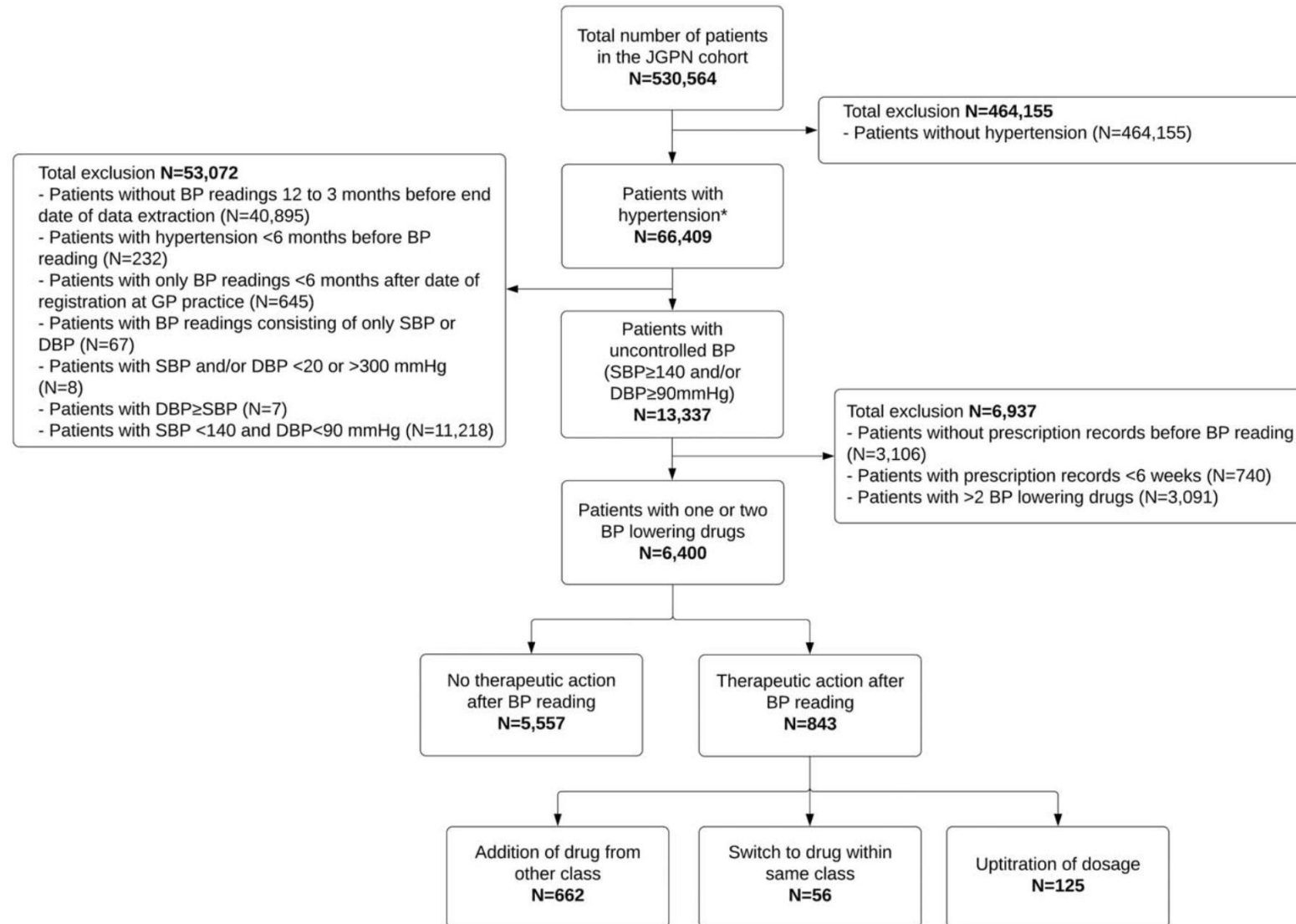
Klinische inertie 1^e lijn in NL

- Hoe vaak komt klinische inertie voor in de 1^e lijn?
- Welke patiëntfactoren zijn gerelateerd aan klinische inertie?
- Welke redenen geven huisartsen aan voor klinische inertie?
- Welke lessen halen we hier uit?

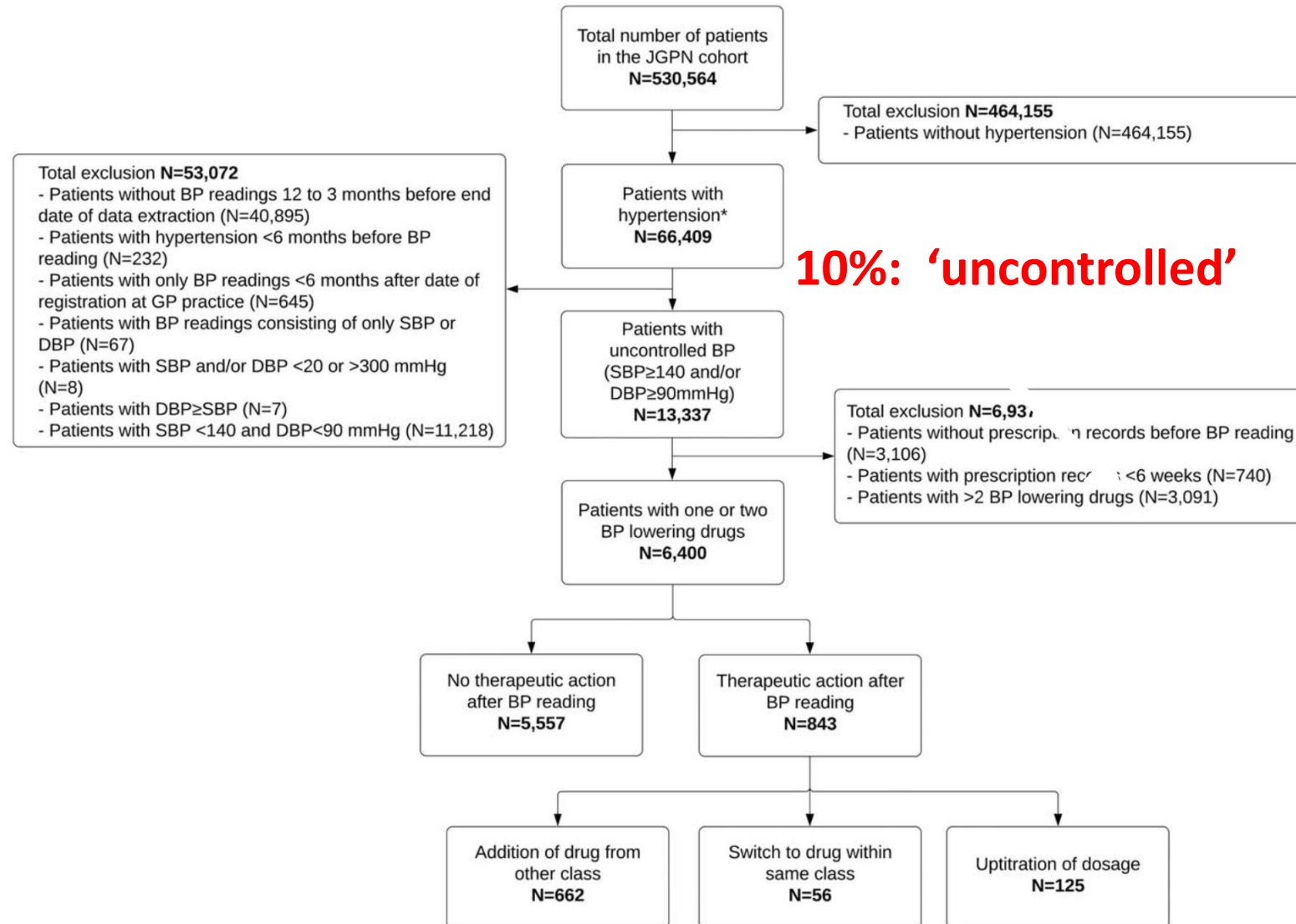
Klinische inertie 1^e lijn in NL

- Observationeel onderzoek in database van Julius Huisartsen Netwerk
- Routine 1e lijns zorgdata van ca 530.000 patiënten in de Utrechtse regio
- 2017-2019
- 13.337 ptn met hypertensie en 1 of 2 bloeddrukverlagers

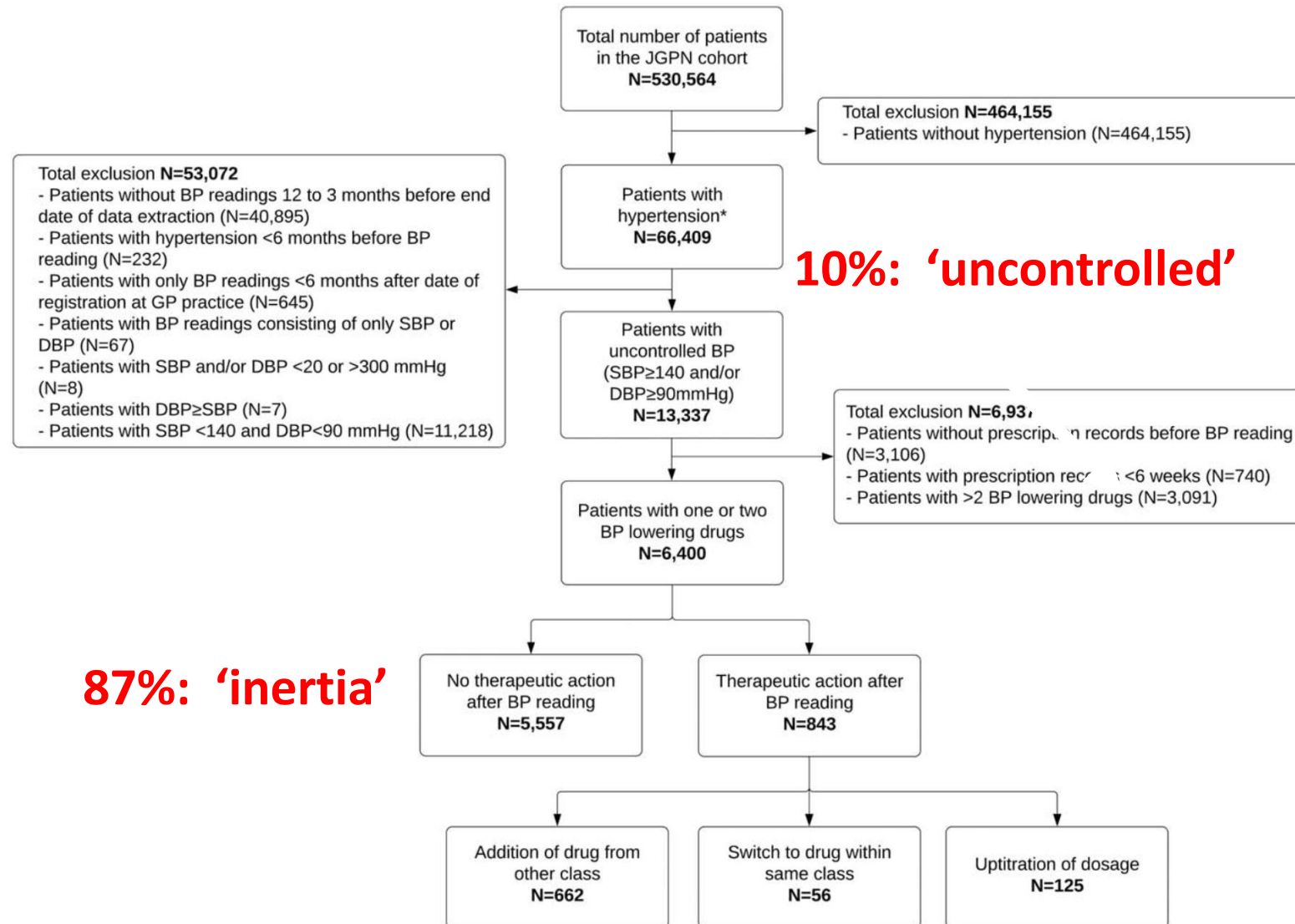
Studiepopulatie



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Patiëntkenmerken bij inertie

TABLE 1. Variables possibly associated with therapeutic inertia in hypertensive patients with uncontrolled blood pressure in the Julius General Practitioners' Network cohort (2017–2019)

Variable	Inertia, <i>n</i> = 5557	No inertia, <i>n</i> = 843	<i>P</i> value
Age (years) ^a	71 (62–79)	69 (60–77)	<0.001
SBP (mmHg) ^a	146 (140–155)	152 (144–162)	<0.001
DBP (mmHg) ^a	84 (78–90)	88 (80–94)	<0.001
Women	3202 (58)	463 (55)	0.140
Near-target SBP ^b	2728 (49)	267 (32)	<0.001
Smoker (current or past)	1435 (26)	209 (25)	0.523
Obesity (BMI > 30 kg/m ²)	2770 (50)	388 (46)	0.039
Dyslipidaemia	2827 (51)	385 (46)	0.005
Diabetes	1803 (32)	226 (27)	0.001
Renal insufficiency	666 (12)	114 (14)	0.203
Angina pectoris	598 (11)	95 (11)	0.658
Coronary heart disease	475 (9)	71 (8)	0.903
Heart failure	248 (5)	45 (5)	0.257
Stroke and/or TIA	655 (12)	79 (9)	0.040
Aortic aneurysm	85 (2)	16 (2)	0.424
Peripheral artery disease	417 (8)	58 (7)	0.520
Family history of CVD	99 (2)	21 (3)	0.157
One pill (mono-drug or FixDCT)	3129 (56)	510 (61)	0.022

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Factoren geassocieerd met inertie

TABLE 2. Univariable and multivariable logistic regression of variables possibly associated with therapeutic inertia in the Julius General Practitioners' Network cohort (2017–2019, *n* = 6400)

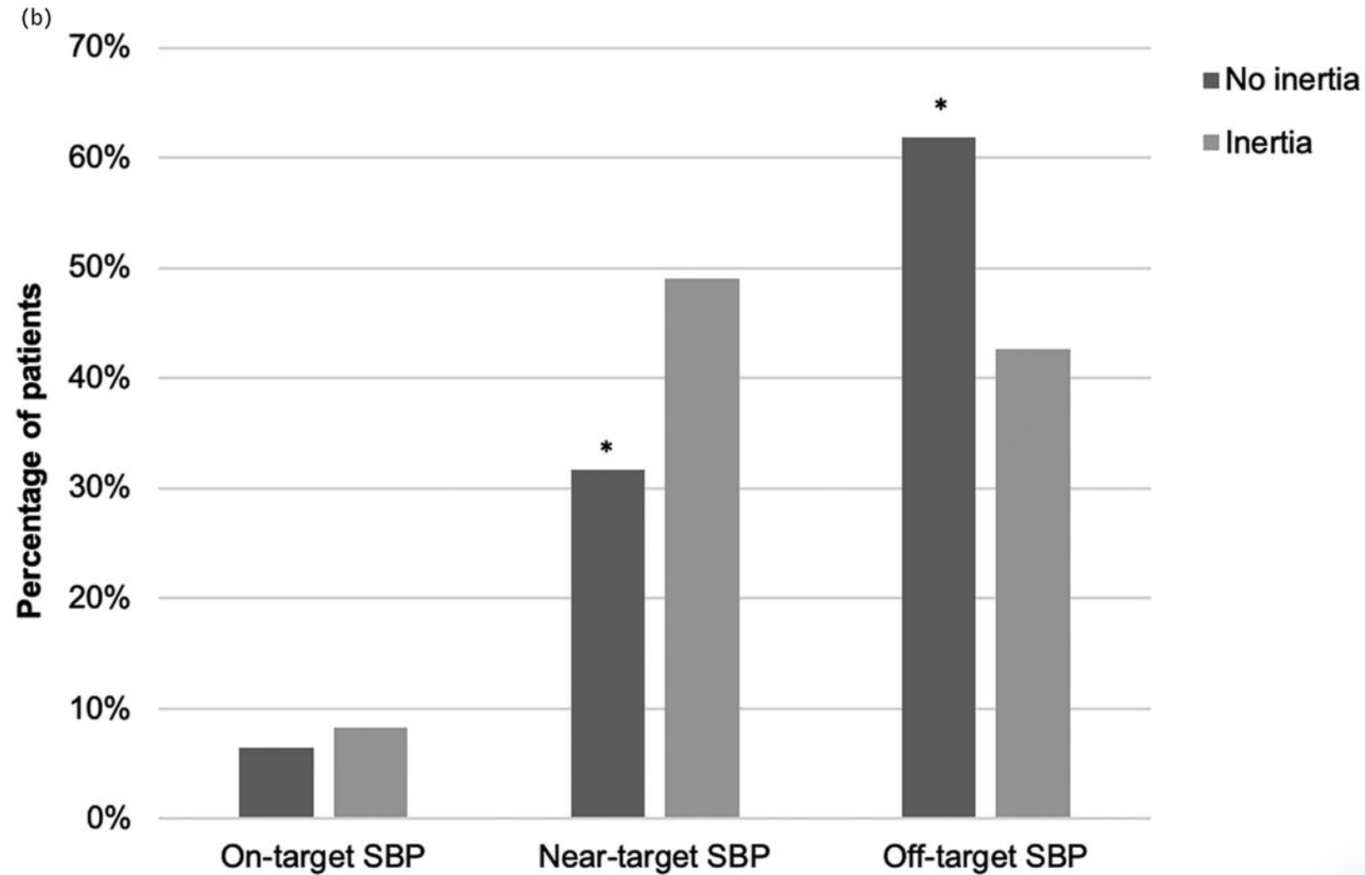
Variable	Univariable OR (95% CI)	<i>P</i> value	Multivariable OR (95% CI)	<i>P</i> value
Age (per year)	1.013 (1.008, 1.019)	<0.001	1.019 (1.012, 1.027)	<0.001
SBP (per mmHg)	0.968 (0.963, 0.973)	<0.001	0.973 (0.965, 0.981)	<0.001
DBP (per mmHg)	0.967 (0.960, 0.975)	<0.001	0.986 (0.978, 0.994)	0.001
Women ^a	1.116 (0.965, 1.291)	0.140		
Near-target SBP ^b	2.253 (1.925, 2.637)	<0.001	1.355 (1.090, 1.684)	0.006
Smoker	1.056 (0.893, 1.249)	0.523		
Obesity	1.166 (1.008, 1.348)	0.039		
Dyslipidaemia	1.232 (1.065, 1.425)	0.005		
Diabetes	1.311 (1.115, 1.542)	0.001	1.312 (1.110, 1.551)	0.001
Renal insufficiency	0.871 (0.703, 1.078)	0.204	0.732 (0.581, 0.921)	0.008
Angina pectoris	0.949 (0.755, 1.195)	0.658		
Coronary heart disease	1.016 (0.783, 1.319)	0.903		
Heart failure	0.828 (0.598, 1.148)	0.258	0.692 (0.491, 0.976)	0.036
Stroke and/or TIA	1.292 (1.011, 1.652)	0.041		
Aortic aneurysm	0.803 (0.468, 1.377)	0.425		
Peripheral artery disease	1.098 (0.826, 1.460)	0.520		
Family history of CVD	0.710 (0.441, 1.143)	0.159		
One pill (mono-drug or FixDCT) ^c	0.841 (0.726, 0.976)	0.022		

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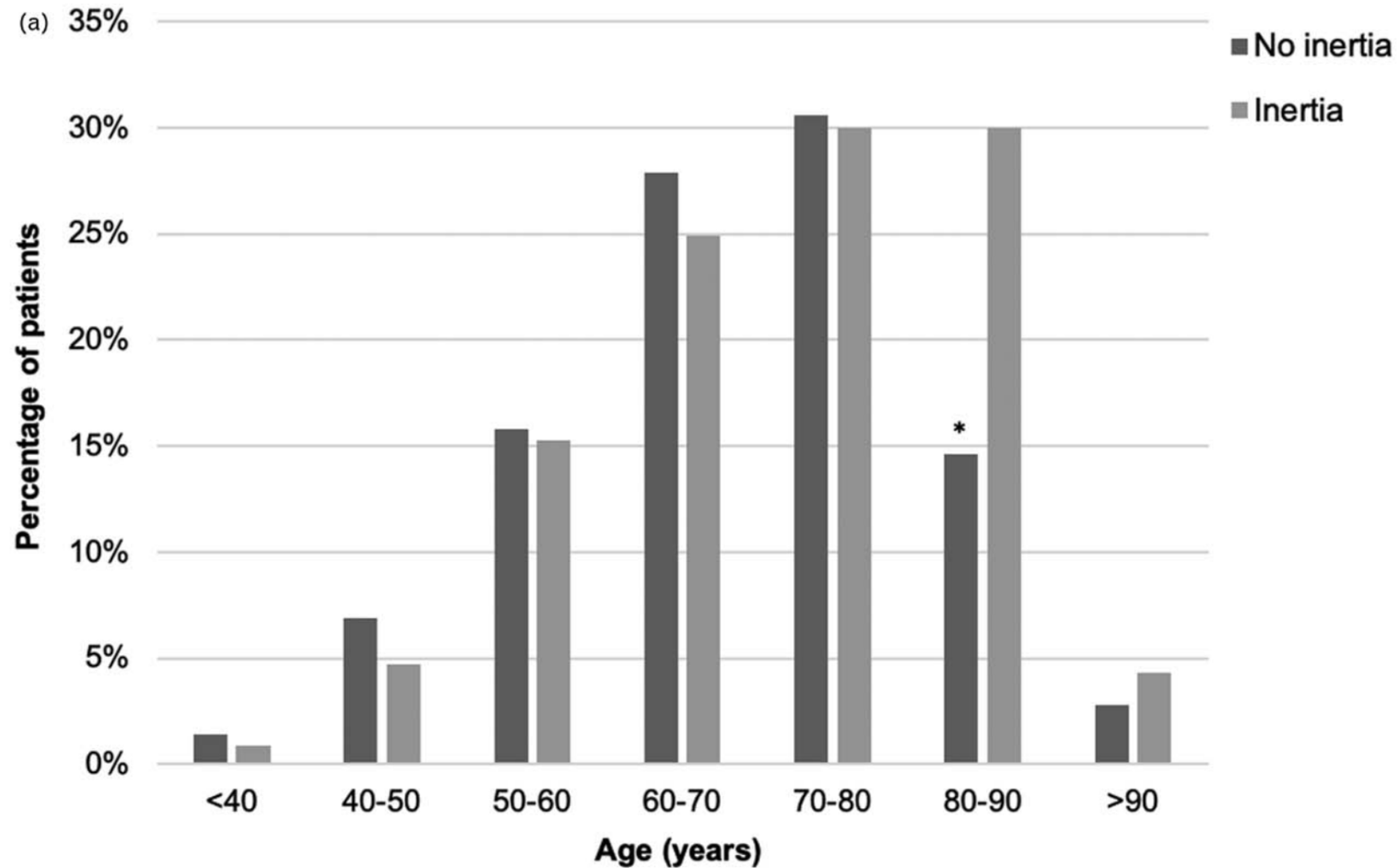
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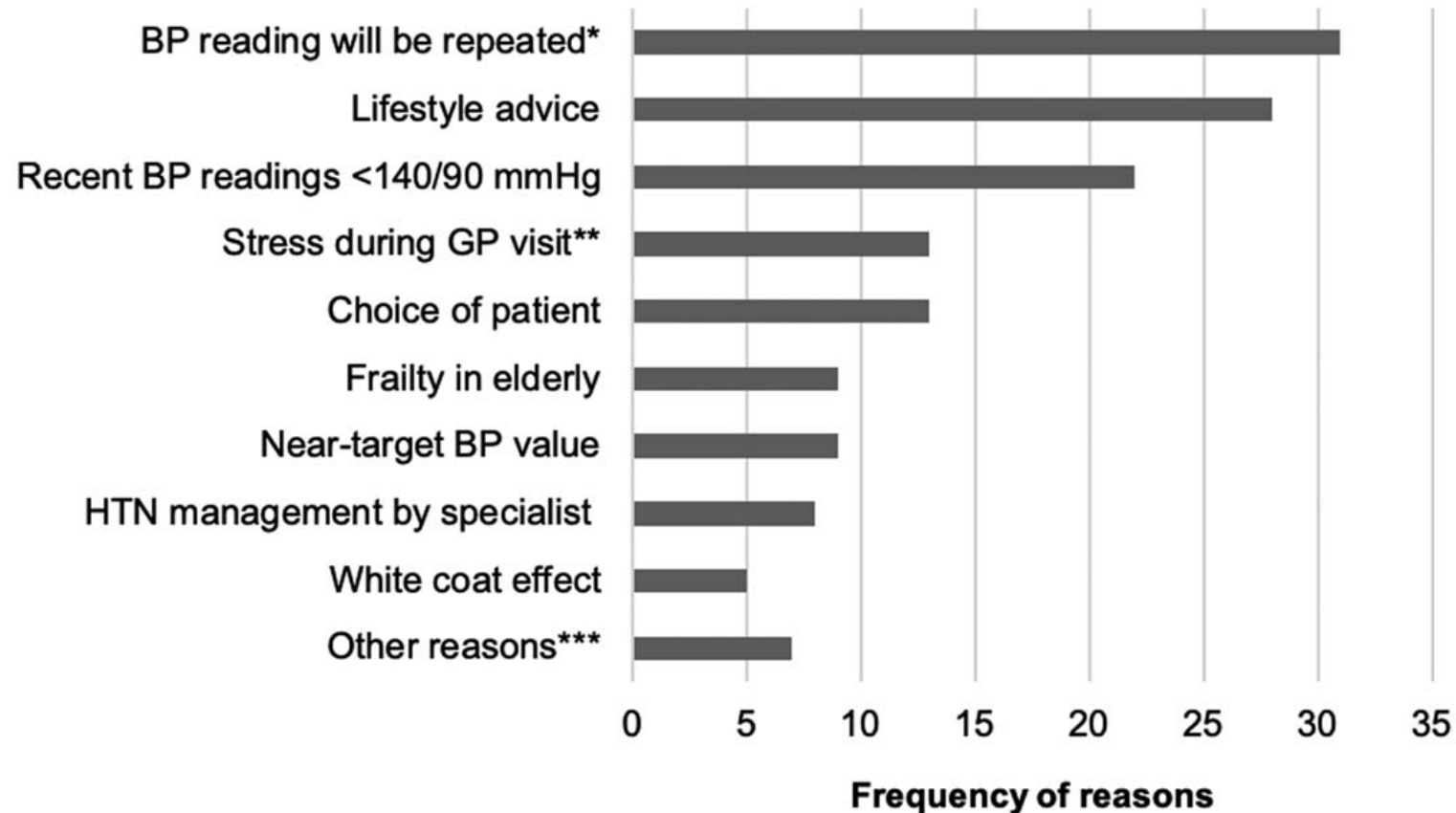
Inertie en 'target' behandeling



Inertie en leeftijd



Redenen klinische inertie bij huisarts



Klinische inertie 1^e lijn in NL

Komt zeer veel voor; 87%

Meer bij:

- Hogere leeftijd
- Diabetes
- Lagere bloeddruk
- Near-target bloeddruk

Minder bij:

- Hartfalen
- Nierfunctiestoornissen

Hoe verbeteren?



- Scholing van zorgverleners (implementatie)
 - Reminders en ICT support in elektronische dossiers
 - Voorlichting van patiënten
 - ABPM
 - Benchmarking tussen zorgverleners
 - Inzet van de apotheker
-
- Potentie 1^e lijn: ontwikkeling van een Learning Health Care system

Digital Health

The field of health that involves the use of information and communications technology (ICT; i.e. digital technologies) to support health and health-related fields.

Digital Medicine

The part of digital health that relates to the use of technology to facilitate medical care and treatment (the objective is to solve medical issues using digital means).

Software as a Medical Device (SaMD)

Programs for medical purposes, including analysis and diagnosis, that are approved by regulatory authorities.

Digital Therapeutics (DTx)

Evidence-based interventions applied via high-quality software programs that are approved by regulatory authorities with the aim of treating and managing disease.

Treatment

Mobile application

Physicians' console

Diagnosis

Education

Research

Monitoring

Medication

Imaging

Smart devices

Connected equipment

Internet of things

Artificial intelligence

Robotics

Virtual reality

Big data



Suggesties?