Hypertension treatment guidelines 2017

[Skip to Content] Skip to the main content of JACC Journals › Guidelines and Clinical Documents › Hubs Chairs Guidelines: P.K. Whelton,R.M. Carey, et al. November 2017 DOI: 10.1016/j.jacc.2017.11.006 Guidelines for High Blood Pressure Guidelines in slide Read the latest news The 2017 Guideline is an update of the Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation and Evaluation of High Blood Pressure (JNC 7), published 2003. This guideline is comprehensive and includes new information from studies on cardiovascular risk (BP) in relation to blood pressure (BP), BP ambulatory monitoring (ABPM), bp domestic monitoring (HBPM), BP thresholds for the start of antihypertensive drug therapy, BP treatment targets, strategies to improve treatment and control of hypertension, and various other important issues. Central illustration: The updated classification and management of high blood pressure (BP) in adults by the American Academy of Cardiology (ACC) together with co-working organisations creates guidelines for clinical practice that become ACC policy at the time of publication. All clinical practice guidelines are subject to rigorous peer review, independent of the editors/editorial processes of the Journal of the American College of Cardiology (JACC). JACC editors shall not receive compensation since the publication of guidelines or other ACC clinical/political documents. For more information on the procedures in the guidelines, click here: About the Guidelines and clinical documents U november 2017. The Guideline for Prevention, Detection, Evaluation and Management of Adult High Blood Pressure Codes (2017 American College of Cardiology [ACC]/American Heart Association [AHA] hypertension [HTN] guideline).1Whelton P.K. Carey R.M. Aronow W.S. et al. ACC/AHA/AAPA/ABC/ACPM/AGS/APHA/ASH/ASPC/NMA/PCNA guidelines for the prevention, detection, evaluation and management of high blood pressure in adults: Summary of executive work: Report of the American Cardiology Working Group/American Heart Association on Guidelines for Clinical Practice. This new HTN national guideline goes beyond the various guidelines (with the exception of certain guidelines for specific comorbidity) that have previously been applied in practice since the last national guideline was issued in 2003.2Chobanian A.V. Bakris G.L. Black H.R. et al. Seventh report of the Joint National Committee for the Prevention, Detection, Evaluation and Treatment of High Blood Pressure. Crossref PubMed Scopus (9279) Google ScholarThe new guideline was based on meta-analyses, with the aim of answering the following four questions in adults with HTN.3Reboussin DM, Allen NB, Griswold ME, Guallar E, Hong Y, Lackland DT, Miller ER 3rd, Polonsky T, Thompson-Paul AM, Vupputuri S. Systematic review for the 2017 ACC/AHA/AAPA/ABC/ACPM/AGS/APhA/ASH/ASPC/NMA/PCNA guideline for prevention, detection evaluation, and management of high BP in adults: A report of the American College of Cardiology/American Foundation association task force on clinical practice guidelines. Available online on www.onlinejacc.org/content/early/2017/11/04/j.jacc.2017.11.004. 4018 8th St. Nw. Systolic decrease in blood pressure and risk of cardiovascular disease and mortality: Systematic examination and network meta-analysis. Crossref Scopus (213) Google ScholarTo support its recommendations, the guideline used class (strength) of recommendation and class (quality) of records (see sidebar on page 58). Throughout this article, you will find both the recommendation class and the level of evidence (e.g. I, B-NR) for the current recommendations.1Whelton P.K. Carey R.M. Aronow W.S. et al. ACC/AHA/AAPA/ABC/ACPM/AGS/APHA/ASH/ASPC/NMA/PCNA Guideline for Prevention, Detection, Evaluation and Management of High Blood Pressure In Adults: Executive Summary: Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines.Activity type: American Pharmacists KnowledgeProvider: American Pharmacists AssociationTarget audience: PharmacistsRelease date: April 1, 2018 Expiry date: April 1, 2021ACPE Universal Activity Number: 0202-0000-18-145-H04-PCPE credit: 2 times (0.2 CEUs)Standing: For APhA members no standing. APhA accredits the Accreditation Council for Pharmaceutical Education (ACPE) as a provider of permanent pharmaceutical education (CPUs). Advisory Committee: Karen J. McConnell, PharmD, FCCP, BCPS-AQ Cardiology, ASH-CHC, Systemic Director of Clinical Pharmacy Services, National Clinical Enterprise, Catholic Health Initiatives, Englewood, CO; And Joseph J. Saseen, PharmD, BCPS, BCACP, CLS, FCCP, FASHP, FNLA, Professor and Path chair, chair of the apothecary i family medicine, University of Colorado Anschutz Campus Skaggs School of Pharmacy and Pharmaceutical Sciences, Denver.Disclosures: Karen J. McConnell, PharmD, FCCP, BCPS-AQ Cardiology, ASH-CHC; Joseph J. Saseen, PharmD, BCPS, BCACP, CLS, FCCP, FASHP, FNLA; The APhA editorial board and the editorial board of the APhA shall not declare any conflict of interest or financial interest in any of the products or services listed in that activity, including grants, employment, gifts, share holding companies and fees. For full staff disclosures, see www.pharmacist.com/apha-disclosures.Development: This activity CPU home-study was developed by APhA.After participating in this activity, Phatises could be able to bring to the level of B-NR (non-randomized)C-LD level (limited data)C-EO level (expert thinking)Various national organisations in the United States have confirmed this Guideline, i:U of the ACC/AHA HTN Guideline for 2017. For diagnosis, BP levels were reduced by 1. In addition, measurement of BP outside the office was also recommended to confirm the diagnosis of HTN. Recommendations have been proposed for thresholds for the introduction of non-pharmacological and Interventions. Specific drug recommendations have been made for various concomitant conditions such as heart failure or chronic kidney disease (CKD). Details of all these changes are included in this article. HTN is defined by a certain BP categorization: normal, elevated, or Phase 1 or 2 HTN for the prevention and treatment of high BP. (I, B-NR) While no longer before HTN, Phase 1 and Phase 2 HTN are still used, but with different BP levels in these indications (Table 1). Note, BP is now categorized as HTN when the systolic BP (SBP) is 130 mm Hg or higher and/or diastolic BP (DBP) is 80 mm Hg or higher. That's 10 mm Hg higher than in previous GuidelinesTable 1Blood Pressure (BP) category An estimated 103.3 million U.S. adults now have HTN, according to the new ACC/AHA HTN guideline for 2017. Overall, the prevalence of HTN, defined as BP 130/80 mm Hg or higher or the use of antihypertensive therapy, is 46%, in men have a higher prevalence (48% vs. 43% for women). This prevalence is much higher than when HTN was defined as BP 140/90 mm Hg or more (overall prevalence was 32 %). The prevalence of HTN also increases with age, with HTN having 79% of men and 85% of women over 75 years of age. In 2015, there were more than 78,800 deaths, which can be attributed mainly to bp highs and 427,631 deaths with each mention of bp (~16% of all deaths). The age-adjusted death rate attributable to bp's high was 21.0 per 100,000 in 2015. From 2005 to 2015, the HTN-attributable death rate increased by 10.5%, while the actual number of deaths attributable to HTN increased by 37.5%. In a study of more than 1 million adults with HTN, the lifetime risk of cardiovascular disease (CVD) was 60.2% for patients with HTN and 44.6% for their counterparts without HTN at age 60. About 69% of people with a first heart attack, 77% with a first stroke, and 74% with heart failure have BP of 140/90 mm Hg or more. There are clearly real risks associated with HTN. The relationship between BP and CVD events shall be continuous, consistent and independent of other risk factors. For persons aged 40-70 years, any inflow of 20 mm Hg into SBP or 10 mm Hg in DBP doubles the cvd risk in the range of 115/75 mm Hg-185/115 mm Hg. HTN has swollen organs, including the heart (left-run hypertrophy, angina i myocardial infarction [MI], coronary revascularisation, cardiac retardation[sedulhard of ejection fraction]); stroke or transient ischaemic attack [TIA]); kidney disease; peripheral arteries; and eyes (retinopathy). The estimated direct and indirect costs of HTN in 2013-2014 (annual average) were $53.2 billion. The benefits of BP reduction with the introduction of antihypertensive drugs have been proven. BP lowering medicinal products were associated with a relative reduction in the incidence of stroke (35%-40%), MI (20%-25%), heart failure (>50%). In patients with BP greater than or equal to 140/90 mm Hg and additional additional additional risk factors, achieving a permanent 12-mm hg reduction in SBP for 10 years will prevent one death for every 11 patients treated. For CVD or other target organ damage, only nine patients would require such a reduction in BP to prevent death. In addition, the greater the risk of CVD, the greater the benefit of bp reduction. In patients with HTN.1Whelton P.K. Carey R.M. Aronow W.S. et al. ACC/AHA/AAPA/ABC/ACPM/AGS/APHA/ASH/ASPC/NMA/PCNA guidelines for the prevention, detection, evaluation and management of high blood pressure in adults: Summary of executive work: Report of the American Cardiology Working Group/American Heart Association on Guidelines for Clinical Practice. (I, B-NR) CvD risk modifiable risk factors are currently cigarette or second-hand smoking, diabetes, dyslipidaemia, overweight/obesity, physical inactivity/low fitness and not a healthy diet. Relatively fixed risk factors that are impossible or very difficult to change are CKD, family history, increased age, low socioeconomic/educational status, male sex, obstructive sleep apnoea and psychosocial stress. Approximately 90 % of HTN is considered essential, with no identifiable cause. However, screening of specific forms of secondary HTN is recommended when certain clinical indications and physical examinations are present or in adults with resistant HTN.1Whelton P.K. Carey R.M. Aronow W.S. et al. ACC/AHA/AAPA/ABC/ACPM/AGS/APHA/ASH/ASPC/NMA/PCNA guidelines for the prevention, detection, evaluation and management of high blood pressure in adults: Summary of executive work: Report of the American Cardiology Working Group/American Heart Association on Guidelines for Clinical Practice. (I, C-EO) These include: There are common and uncommon secondary causes of htn. Table 2 includes clinical evidence, their findings of the physical examination and screening tests for common causes. Screening of primary adosteronism is recommended for patients with resistant HTN, hypokalaemia (spontaneous or substantial), casually openly annoying mass, family history of early on-start HTN or stroke at a young age (<40 y). (I, C-EO) The relationship between aldosterone and renin plasma activity is recommended for adults who are screened for primary aldosteronism. (I, C-EO) If adults with HTN have a positive screening test for primary aldosteronism, referrals to an HTN specialist or endocrinologist for further evaluation and treatment are recommended. (I, C-EO) Another common secondary cause of HTN is renal artery stenosis. Medical treatment is recommended for adults with renal artery atherosclerosis (I, B-NR) because to date no randomised controlled trials have shown clinical benefits of renal artery revascularization prior to medical treatment. The recommended medical approach is optimal management of HTN with an antihypertensive regimen involving a renin-angiotensin system inhibitor in addition to a reduction in high-intensity LDL-C a1C reduction in patients with diabetes mellitus and antithrombin therapy. In adults with renal artery stenosis who have failed treatment with the medicinal product (HTN refractive, deterioration of renal function and/or non-visually related heart failure) and patients with nonate ity disease, including fibromuscular dysplasia, a reasonable dose of revascularisation (angioplasty and/or stinta) may be initiated. (IIa, C-EO) Obstructive sleep apnoea is another common cause of HTN. Continuous positive air pressure (CPAP) is an effective treatment to improve obstructive sleep apnoea. However, studies of cpap effects on BP showed only minor effects (reduction of 2-3 mm Hg) with results dependent on the patient's compliance with CPAP use, the severity of obstructive sleep apnoea and the presence of daily sleepiness in study participants. If certain clinical indications and physical examination functions previously discussed are present in adults with resistant HTN and common causes of HTN cannot be found, occasional causes can be taken into account. These include phenochromocytoma/paragangliom, Cushing's syndrome, hypothyroidism, hyperthyroidism, aorta coarctation (undiagnosed or corrected), primary hyperparathyroidism, congenital adrenal hyperplasia, mineralocorticoid excess syndromes other than primary aldosteronism, and acromegaly. If an adult with a permanent HTN screen tested positive for a form of secondary HTN, it is recommended that a physician with expertise in this form of HTN be referred for diagnosis and treatment. (IIa, C-EO) In addition to the country's disease, which can cause HTN, some drugs have the potential to worsen BP control. Patients with HTN should limit alcohol intake (≤1 drinks/d for women, ≤2 drinks/d for men). Amphetamines can also increase BP; for patients with HTN, efforts should be made to discontinue or reduce amphetamine doses and treat behavioural therapy as an alternative where possible. Some antidepressants, such as SNRI and tricyclic antidepressants, may increase BP. Alternative antidepressant agents should be considered, although tiramine should be avoided with an MAOI. The use of atypical psychotic medicinal products should be restricted, where clinically permitted, by alternative medicinal products and behavioural therapy used where possible. Some herbal products may also increase BP, so their use should be avoided (e.g. ma huang [efedra], St. John's [with MAO inhibitors, yohimbine]). Caffeine intake should be limited to less than 300 mg/d and patients with uncontrolled HTN should be avoided. Oral decosterants, if unavoidable, should be used as shortly as possible. If oral contraceptives are used in women with HTN, only low-dose or progestin estrogen should be prescribed. Alternative contraception (e.g. intrauterine device) should be considered. The widespread use of NSAIDs for oral OTC may be particularly problematic in with HTN, and these medicinal products should be used at a minimum dose of alternative analgesics (oral or topical) if possible. Bp is often not measured correctly in clinical practice and the result is falsely elevated readings. Proper measurement of BP is essential to avoid misdiagnosis of HTN or the on-going of inappropriate medications or adjustments. Appropriate methods for accurate measurement, documentation, diagnosis and management of BP.1Whelton P.K. Carey R.M. Aronow W.S. et al are recommended. ACC/AHA/AAPA/ABC/ACPM/AGS/APHA/ASH/ASPC/NMA/PCNA guidelines for the prevention, detection, evaluation and management of high blood pressure in adults: Summary of executive work: Report of the American Cardiology Working Group/American Heart Association on Guidelines for Clinical Practice. (I, C-EO) Patients should be released and treated before measuring BP, with their feet on the floor and back supported for at least 5 minutes. Patients should avoid caffeine, exercise and smoking at least 30 minutes in the morning and should not have a full bladder. There should be no conversation during the measurement, and the hand with the cuff must be bare. The correct technique involves using a validated device with the correct cuff size (the bladder encircles 80% of the arm), while the patient's arm is supported and there is a cuff in the middle of the chest. Inflate the cuff 20-30 mm Hg above the palpated radial pulse, and blow off the 2 mm Hg/s. The readings must be separated by 1-2 minutes. Clinical patients should correctly document the exact BP readings and record SBP and DBP using the nearest judicial number. It is recommended to take into account the time of the latest BP medicines to take. The readings should be averaged using at least two readings on at least two occasions and provided to the patient in oral and written. In order to confirm the diagnosis of htn and bp lowering titrat, tele-ealtia and/or other clinical interventions, it is recommended that BP measurements be confirmed outside the office. (I, C-EO) Patient training should be under medical supervision before using pet BP monitors, which must be automated and validated with the appropriate cuff size. Memory must be available to store readings. While readings are measured at home, patients must follow the same technique used in the office (stay still, sit down properly, take more readings, record readings). In outpatient BP monitoring (ABPM), patients carry a portable BP-mear device on their non-mandatory arm for 24 hours. This allows frequent BP measurements during daily activities and during sleep. Systolic ABPM predicts stroke and other CV results independently of bp office monitoring. BPs measured in different settings and with different devices must comply (Table 3). For example, if the target of the CLINIC BP is less than 130/80 mm Hg, 24-sar mean BP should be down from 125/75 mm Hg, mean daytime BP below 130/80 mm Hg, a mean nighttime BP below 110/65 mm Hg.Table 3Coresponding blood pressure (BP) valuesObbreviation is benefit: HBPM, blood at home monitoring; ABPM, the U.S. Preventive Services Group (USPSTF), issued a statement in October 2015 reviewing BP's high in adults. In patients with elevated pressure in the office, clinical patients should confirm the diagnosis of HTN with readings outside the clinical setting (24-h ABPM or domestic monitoring bp [HBPM] readings). The purpose of this Recommendation is to reduce the number of patients with a misdiagnosis of HTN as a result of short-term increases in BP (e.g. due to stress, pain or caffeine intake), white HTN coat or BP measurement errors. However, outside confirmation in all cases, such as patients with very high BP (>180/110 mm Hg), patients with signs of end organ damage, and patients with HTN resulting from the condition (e.g. CKD). A fairly new way of measuring BP is with automatic oscilometric BP (AOBP) monitors. AOBP devices take many consecutive BP readings in the office with the patient sitting and resting alone. It is important to know that appropriate techniques are still needed. Compared to conventional manual office measurements, AOBP devices typically experience a reduced white coat response. In addition, AOBP devices can be programmed to automatically obtain and average three or more readings to meet the criteria for consecutive measurements. The ACC/AHA HTN Guideline for 2017 uses two terms white mantle and a htn. The white HTN coat occurs when the bp office readings are 130/80 mm Hg-160/100 mm Hg after a 3-month lifestyle change trial, but with daily ABPM or HBPM readings of less than 130/80 mm Hg. In adults with untreated SBP of 130 mm Hg or higher but less than 160 mm Hg, or DBP 80 mm Hg or more but less than 100 mm Hg, it is appropriate to display the white HTN coat using either daily ABPM or HBPM before diagnosing HTN. (IIa, B-NR) In adults with a white HTN coat, regular monitoring with ABPM or HBPM is reasonable to detect a switch to permanent HTN. (IIa, C-LD) In adults treated for HTN with non-target BP readings and HBPM readings showing a significant white coat effect, ABPM confirmation may be beneficial. (IIa, C-LD) In adults on multiple medication therapies for HTN and office BPs within 10 mm Hg above the target, it may be reasonable to screen for a white coat effect with HBPM. (IIb, C-LD) Masked HTN is defined as office BP readings between 120 mm Hg and 129 mm Hg/<80 mm Hg after a 3-month attempt to change lifestyle, while daily ABPM or HBPM is 130/80 mm Hg or more. In adults with untreated BPs offices who are consistently between 120 mm Hg and 129 mm Hg for SBP or between 75 mm Hg and 79 mm Hg for DBP, a check for disagated HTN with HBPM (or ABPM) is reasonable. (IIa, B-NR) It is also possible to reasonably review masked uncontrolled HTN with HBPM in adults treated for HTN who have office readings that are aimed at having target organ damage or an increased overall cvd. (IIa, In adults treated for HTN with elevated HBPM readings suggestive of masked uncontrolled HTN, confirmation of abpm diagnosis may be reasonable prior to intensive treatment with antihypertensive medicinal products. (IIa, C-EO) The appropriate patient assessment is critical in the care of patients with HTN.1Whelton P.K. Carey R.M. Aronow W.S. et al. ACC/AHA/AAPA/ABC/ACPM/AGS/APHA/ASH/ASPC/NMA/PCNA guidelines for the prevention, detection, evaluation and management of high blood pressure in adults: Summary of executive work: Report of the American Cardiology Working Group/American Heart Association on Guidelines for Clinical Practice. The first step is to determine whether the patient has primary or secondary HTN. Characteristics of the primary HTN include the gradual increase of BP with the slow rate of BP's rise, the presence of lifestyle factors that favor a higher BP, and the family history of HTN. Secondary HTN usually presents signs and symptoms of various causes of BP Including BP lability and episodic pallor vertigo, if it is caused by phenohomocytoma, hrsing and hypersomnolence, if it is caused by opstrutive apnoea, prostatimism, if this is CKD (caused by opstrut of postrenal urinary tract), these muscle cramps and nausea, if this is, among other things, hypo-caused by akalemia. Laboratory and diagnostic testing provides objective data when assessing patients.1Whelton P.K. Carey R.M. Aronow W.S. et al. ACC/AHA/AAPA/ABC/ACPM/AGS/APHA/ASH/ASPC/NMA/PCNA guidelines for the prevention, detection, evaluation and management of high blood pressure in adults: Summary of executive work: Report of the American Cardiology Working Group/American Heart Association on Guidelines for Clinical Practice. Basic tests – such as fasting blood glucose, complete blood cell image, lipid profile, serum creatinine with estimated glomerular filtration rate (eGFR), serum electrolytes, thyroid stimulating hormone, urinalysis and electrocardiogram – are necessary to examine end organ damage and to determine whether any cv risk factors are present. Elective testing is also recommended for some patients, depending on their clinical circumstances, including an ehocardiogram, serum urinary acid and the urinary relationship albumin to creatinine. BP targets for patients with HTN should be set for patients at diagnosis.1Whelton P.K. Carey R.M. Aronow W.S. et al. ACC/AHA/AAPA/ABC/ACPM/AGS/APHA/ASH/ASPC/NMA/PCNA guidelines for the prevention, detection, evaluation and management of high blood pressure in adults: Summary of executive work: Report of the American Cardiology Working Group/American Heart Association on Guidelines for Clinical Practice. For adults with confirmed HTN and known CVD or 10-year atherosclerosis cardiovascular disease (ASCVD) event risk 10% or more, recommended BP target of less than 130/80 mm Hg. (I; SBP: B-R, DBP: C-EO) For adults with certified HTN without additional markers of increased CVD risk, bp target of less than 130/80 mm Hg may be reasonable. SBP: B-NR, DBP: C-EO)Tabela 4 prikazuje prikazuje BP sleepers and targets for patients with HTN under comorbid conditions. Clinical trials and meta-analyses comparing BP targets have been used to set these BP targets. ACC/AAH has completed a systematic review and meta-analysis of the network, systolic reduction in blood pressure and risk of cardiovascular disease and mortality, published in 2017.4Bundy J.D. Li C. Stuchlik P. et al. Systolic decrease in blood pressure and risk of cardiovascular disease and mortality: Systematic examination and network meta-analysis. Crossref Scopus (213) Google Scholar This meta-analysis assessed the association at the achieved SBP levels with the risk of CV and all-cause mortality in adults with HTN treated with antihypertensive therapy. The experiments were not promising comparisons of bp's specific objectives, but values achieved between trials. More than 144,000 patients were enrolled from 42 trials and a link was seen between the inter-privately achieved SBP and the cv risk and mortality (Figure 1). Figure 1Major cardiovascular disease and mortality of all causes associated with intensified reductions in systolic blood pressureSource:Reference 4Bundy J.D. Li C. Stuchlik P. et al. Systolic decrease in blood pressure and risk of cardiovascular disease and mortality: Systematic examination and network meta-analysis.. The authors found that reducing SBP at levels below historically recommended targets (based on guidelines ahead of the 2017 ACC/AHA guidelines) could significantly reduce CVD and all-cause mortality. The SPRINT results (a randomized intensive trial compared to standard blood pressure control) were published in 2015. More than 9,300 people aged 50 and over With sbp 130 mm Hg-180 mm Hg and an increased risk of CV (clinical or subclinical CVD other than stroke, CKD, 10-year Framingham risk of 15% or more, aged 75 and older), were randomized to a SBP target less than 120 mm Hg or less than 140 mm Hg (according to ABPM). Intensive control reduced the primary outcome of composite MI, acute coronary syndrome, Acutely decompensated cardiac impairment, death from cardiovascular cause (1.65%/y vs. 2.19%/y; hazard ratio [HR] 0.75 [95% CI 0.64-0.89], P < 0.001), with the number required for treatment 61. These benefits also occurred in patients over 75 years of age.The study also showed that increased rates of hypotension, syncope, electrolyte abnormalities and acute renal injury/failure occurred in the intensive arm. The number required for the damage was 100 for hypotension. SPRINT excluded patients with diabetes mellitus, cerebrovascular disease, symptomatic heart failure or decreased left dose fracture fraction and advanced renal dysfunction (eGFR < 20 ml/min/1.73 m2 or end-stage renal disease), and therefore extrapolation of findings into these groups is limited. Individualised decision-making is important and should consider the risk versus the benefits, such as o Patient preference and quality of life (e.g. addition of another medicine, potential adverse reactions to medicines). -BP (Control Measure) The diabetes blood pressure risk trial, published in 2010, was a randomised, controlled trial involving more than 4,700 patients with type 2 diabetes who had a CVD or at least two additional risk factors for CVD. Patients were assigned either intensive treatment (SBP target < 120 mm Hg) or standard treatment (SBP target < 140 mm Hg). Baseline BP was 139/76 mm Hg. Mean was 119.3 mm Hg in the intensive care group and was 133.5 mm Hg in the standard treatment group. non-fatality from cardiovascular cause) was a significant difference in the rate of primary composite score (non-fatal MI, non-fatality, nor death from cardiovascular cause) in the intensive and standard therapy group (1.87% nass. 2.09%; 0.88 [0.73-1.06]). In addition, for all-cause mortality (1.28% vs. 1.19%) there was no difference in cardiovascular causes (0.52% vs. 0.49%) between intensive and standard therapeutic groups. Intensive treatment was associated with a significant reduction in annual rates of total stroke and clumsy stroke, albeit with a low rate (0.32% vs. 0.53%; 0.59 [0.39-0.89]). Serious adverse reactions to antihypertensive medicinal products (e.g. hypotension, syncope, bradycardia, electrolyte abnormalities, angioedema and renal failure) occurred significantly more frequently in the intensive treatment group than in the standard treatment group (3.3% vs. 1.3%). This trial affected BP's goals in the American Diabetes Association's (ADA) health care standards in 2018 in Diabetes.In. december 2017, was published post-hoc, Multivarijatic, sub-consolidated analysis of accord-BP trial to determine the effect of intensive BP monitoring on CVD in patients with diabetes.10Buckley L.F. Dixon D.L. Wohlford G.F. Wijesinghe D.S. Baker W.L. Van Tassell B.W. Intensities u compared to standard blood pressure control at SPRINT Crossref PubMed Scopus (38) Google Scholar A Cox proportional hazards regression model was used to compare the effect of intense compared to BP's standard control on CVD results. Participants in THE ACCORD-BP qualifying program FOR SPRINT were together with SPRINT participants to determine whether the effects of intense BP control affected diabetes. The results showed a similar baseline baseline CVD risk assessment in the BP intensive and standard control groups (14.5% and 14.8% respectively) in the intensive and standard BP control groups (14.5% and 14.8% respectively; 120 mm Hg in the intensive care group and 134 mm Hg in the bp standard control groups (P < 0,001). In the BP intensive group (0.79 [0.65-0.96], P = 0.02) the composite endpoint (death of CVD, non-fatal MI, non-fatal stroke, any revascularisation and heart failure) was reduced. treatment-related adverse reactions were more frequently seen in the BP intensive care group (4.1% versus 2.1%; P = 0.003). The effect of intensive BP monitoring on CVD outcomes did not differ between patients with and without diabetes (P > 0.62). Although this was a post-approval analysis, it supports the ACC/AHA recommendations for a lower target for patients with diabetes mellitus. When patients are diagnosed with HTN, it is reasonable to determine how their BP should be treated.1Whelton P.K. Carey R.M. Aronow W.S. et al. ACC/AHA/AAPA/ABC/ACPM/AGS/APHA/ASH/ASPC/NMA/PCNA guidelines for the prevention, detection, evaluation and management of high blood pressure in adults: Summary of executive work: Report of the American Cardiology Working Group/American Heart Association on Guidelines for Clinical Practice. BP treatment strategies are determined by patient's BP level and risk of ASCVD (Figure 2, Table 3). The use of BP lowering medicinal products is recommended for secondary prevention of recurrent CVD events in patients with clinical CVD and an average SBP of 130 mm Hg or higher or an average DBP of 80 mm Hg or higher; and for primary prevention in adults with an estimated 10-year RISK OF ASCVD of 10% or more and an average SBP of 130 mm Hg or a higher or mean DBP of 80 mm Hg or higher. (I; SBP: A, DBP: C-EO) Figure 2BP treatment strategy according to BP category and RISK ASCVDOoquip the full inscriptionNote: Initiation of antihypertensive therapy with two first-class medicinal products of different classes, U adult with phase 2 hypertension i average BP > 20/10 mm Hg above target BP, it is recommended to be combined with a fixed dose. Abbreviations used: BP, blood pressure; ASCVD, atherosclerotic cardiovascular disease. The use of a BP lowering product is recommended for primary prevention of CVD in adults with no CVD history and an estimated 10-year risk of ASCVD of less than 10% and SBP 140 mm Hg or more or DBP 90 mm Hg or more. (I, A) Adults with bp or 1 increased BP (I, B-NR) Adults with 1. (I, B-NR) Adults with a grade of 2 HTN should be evaluated by the primary care provider or reported within one month of initial diagnosis, have a combination of non-pharmacological and antihypertensive therapy with medicinal products (with two drugs of different classes), and have a recurrence of BP evaluation within 1 month. (I, B-NR) For adults with very high average BP (e.g. SBP ≥ 180 mm Hg or DBP ≥ 110 mm Hg), an assessment is recommended followed by immediate antihypertensive therapy. (I, B-NR) For adults with a normal BP, every year it is reasonable to repeat the assessment. (IIa, C-EO) Nonpharmacologic therapies and lifestyle changes are important components of BP.1Whelton P.K. Carey R.M. Aronow W.S. et al. ACC/AHA/AAPA/ABC/ACPM/AGS/APHA/ASH/ASPC/NMA/PCNA Guideline for the Prevention, Detection, Evaluation and Management of High Blood Pressure in Adults: Summary of the Executive Committee: Report of the American College of Cardiac Association Task Force on clinical practice guidelines. Table 5 shows the different lifestyle changes recommended and their expected reduction in SBP. Table 5Dosed lifestyle modification In the USA one standard drink contains about 14 g of pure alcohol, usually found in 12 oz of plain beer (usually about 5% alcohol), 5 oz wine (usually about 12% alcohol) and 1.5 oz distilled spirits (usually about 40% alcohol). Abbreviations used: SBP, systolic blood pressure; BMI, body mass index; DASH, dietary approaches to stop hypertension. In addition to lifestyle changes, antihypertensive therapy is an integral part of bp.1Whelton P.K. Carey R.M. Aronow W.S. et al. ACC/AHA/AAPA/ABC/ACPM/AGS/APHA/ASH/ASPC/NMA/PCNA guidelines for the prevention, detection, evaluation and management of high blood pressure in adults: Summary of executive work: Report of the American Cardiology Working Group/American Heart Association on Guidelines for Clinical Practice. The first medicinal products are thiazide diuretics, calcium channel blockers (CCBs) and ACE or ARB inhibitors to initiate antihypertensive therapy. (I, A) (Table 6.) These four classes of medicinal products should be introduced and optimised prior to the use of medicinal products of another type, unless there are other compelling indications for the introduction of another type of therapy (e.g. beta-blocker therapy after MI). ACE and ARB inhibitors have similar clinical uses, including first-line antihypertensive drugs for non-African Americans (supplement therapy for African American patients, after thiazide diuretics and CCB), albuminuria, heart failure, post-MI and secondary prevention of stroke. If one class of drugs cannot be tolerated, the other can be tried. ARB can be considered as an alternative treatment in patients who have developed angioedema while taking an ACE inhibitor; however, angioedema developed in patients with ARB. Extreme caution is recommended when replacing ARB for a patient with HTN who has had angioedema associated with the use of an ACE inhibitor. The risks compared to the benefit of use should be weighed; other agents, if possible. These medicines also have similar side effects, such as hyperkalaemia. Cough is morevalent with ACE inhibitors than with ARB. Concomitant use of an ACE inhibitor, an ARB inhibitor and/or renin may be harmful and not recommended for the treatment of adults with HTN. (III [injury], A) Thiazide diuretics are an option as a first-line treatment for most patients with HTN, either alone or in combination with one of the other classes of drugs (ACE inhibitors, ARB, CCB). Chlortalidone prefers hydrochlorothiazide in accordance with ACC/AHA 2017 HTN. In clinical trials, chlorotalidone has been shown to reduce CV results and hydrochlorothiazide is not available (although a head-to-head comparison is not currently available for CV results). In addition, milligram per milligram, chloratalidon is more hydrochlorothiazide. It is important to monitor serum creatinine, sodium, potassium and magnesium 7-10 days after initiation or titration. Patients taking metolazon may need to be monitored more closely for enhanced diuretic effect, especially when used with loop diuretics. Both CCB, dihydroride and nondihydrorides are considered to be the first type of antihypertensive agents. Dihydroropridines are powerful BP lowering medicines that can improve the symptoms of angina. These medicines are generally well tolerated, except for occasional peripheral oedema. Nondihydroridine CCB may be useful for patients with atrial fibrillation or stable angina due to their heart rate lowering capacity. However, these medicinal products are moderate inhibitors of CYP450 3A4 and may cause serious drug-drug interactions. They must not be used with concomitant heart failure with a reduced injection fraction ([HFrEF] left-to-carry fraction < 40%). Secondary antihypertensive agents are available for use if BP patients remain elevated after optimisation of the first line, unless the comorbid ing conditions dictate their desired use. Secondary antihypertensive drug classes, with special medicinal products in each class, are defined in Table 6.Initiation of antihypertensive therapy with one antihypertensive medicinal product is reasonable in adults with grade 1 HTN and bp target less than 130/80 mm Hg with dose titration and successive addition of other means to achieve the BP target. (IIa, C-EO) However, in adults with 2 years of age, the number of patients with (I, C-EO) Adults starting a new or adapted HTN regimen should have a further assessment of the consistency and response to treatment at monthly intervals until control is achieved. (I, B-R) Post-initiation monitoring and monitoring of HTN surveillance medicinal products should include systematic strategies to improve BP, including the use of HBPM, group care and tele-care strategies. (I, A) HTN should be treated based on the patient's co-morbidity, such as stable ischaemic heart disease (SIHD), heart failure, diabetes, CKD and a history of stroke.1Whelton P.K. Carey R.M. Aronow W.S. et al. ACC/AHA/AAPA/ABC/ACPM/AGS/APHA/ASH/ASPC/NMA/PCNA guidelines for the prevention, detection, evaluation and management of high blood pressure in adults: Summary of executive work: Report of the American Cardiology Working Group/American Heart Association on Guidelines for Clinical Practice. Heart disease is the most common form of damage to target organs associated with HTN. In adults with SIHD and HTN, a BP target of less than 130/80 mm Hg is recommended. (I; SBP: B-R, DBP: C-EO) Adults with SIHD and HTN should be treated with medicinal products (e.g. guideline-oriented medical treatment [GDMT] inhibitor of ACE or ARB) for convincing indication (e.g. previous MI, stable angina) as a first line of treatment, with other medicines added as necessary for further supervision of HTN. (I; SBP: B-R, DBP: C-EO) (Figure 3.) In adults with SIHD with angina and persistent uncontrolled HTN, it is recommended to add dihydropriridine CCB to the GDMT beta inhibitor. (I; SBP: B-NR) Figure 3Hypertension treatment in patients with stable ischaemic heart diseaseKad the full inscriptionObibbbreviation, used: BP, blood pressure; CCB, calcium channel blocker; gdmt focused on the medical therapy guideline. In adults with MI or acute coronary syndrome, it is appropriate to continue the beta GDMT inhibitor after 3 years as long-term htn therapy. (IIa, B-NR) A beta-and/or CCB inhibitor can be considered to control HTN in patients with coronary artery disease ([HFrEF]) who had MI more than 3 years ago and have angina. (IIb, C-EO) HTN is one of the most important modifiable risk factors for HFrEF and heart failure with a maintained ejection fraction (HFpEF). Individuals with HTN have a much higher risk of developing HF than normotensive men and women. Long-term treatment of systolic and diastolic HTN reduces the risk of HF by approximately 50%. HTN is an important contributor to acute decompensated HF. In adults at higher risk of HF, the optimal BP in those with HTN should be less than 130/80 mm Hg. (I; SBP: B-R, DBP: C-EO) Adults with HFrEF and HTN should be prescribed GDMT (ACE or ARB inhibitor, Beta blocker [carvedilol, metoprolol succinate, bisoprolol], aldosterone antagonist) titrated to reach BP less than 130/80 mm Hg. Nondihydropyridine CCB is not recommended for HTN treatment in adults with HFREF. (III [no benefit], B-R) A diuretic should be prescribed for HTN control in adults with HFpEF symptoms of volume overload. (I, C-EO) Adults with HFpEF and persistent HTN, after volume overload control, ACE or ARB inhibitor and beta-blocker, titration to achieve SBP of less than 130 mm Hg (I, C-EO) should be titration. Most patients with diabetes are affected by HTN and HTN is a risk factor for macro- and microvascular complications. Since CVD is number 1 killer and the main source of morbidity in patients with diabetes, controlling cv risk factors such as HTN in patients with diabetes is extremely important. However, the ACC/AHA HTN Guideline 2017 and ADA Diabetes Standards 20189 disagree on the BP target for all diabetes patients. The ACC/AHA Guideline recommends that in adults with diabetes and HTN antihypertensives be introduced in BP 130/80 mm Hg or more with a treatment target of less than 130/80 mm Hg. (I, SBP: B-R, DBP: C-EO) It is stated that in adult patients with diabetes, the first class of antihypertensive agans (e.g. diuretics, ACE inhibiteri, ARB i CCB) is useful and effective. (I, ACE) In the presence of albuminuria, account may be taken of ace or ARB. (IIb, B-NR) Conversely, Diabetes standards 2018 recommend that the that most patients with diabetes mellitus and HTN should be treated with an SBP target of less than 140 mm Hg and DBP target of less than 90 mm Hg. (A) It is rumored that lower SBP i DBP targets, such as 130/80 mmHg, could correspond to individuals at high risk of CVD if they can be achieved without unnecessary treatment burden. (C) The treatment recommendations between the two guidelines are similar. The recommendations for the treatment of ADA indicate that for the treatment of HTN in patients with diabetes mellitus, ACE inhibitors, ARB, thiazide-like diuretics or diuretics of dihydropridine diuretics should be used to treat HTN in patients with diabetes mellitus (A). An ACE or ARB inhibitor at the maximum toleised dose indicated for the treatment of BP is the recommended first htn treatment in patients with diabetes mellitus and the urinary creatinine ratio greater than 300 mg/g of creatinine (A) or 30-299 mg/g creatinine. (B) If one class is not transferred, it must be replaced. (B) The CKD is defined as a glomerular filtration rate (GFR) of less than 60 ml/min/1,73 m2 or the presence of persistent albuminuria. Adults with HTN and CKD should consider the BP target of less than 130/80 mm Hg. (I, SBP: B-R, DBP: C-EO) The leash of ace inhibitors is reasonable to command the progression of kidney disease codes of adult sa HTN i CKD (phase 3, higher, phase 1, 2 sa albuminuria [≥300 mg/d, or ≥300 mg/g albumin ratio i creatinine, or equivalent u first morning void]). (IIa, B-R) Treatment with ARB may be reasonable if the ACE inhibitor is not toleised. (IIb, C-EO) Following kidney transplantation, it is appropriate to treat patients with HTN up to a BP target of less than 130/80 mm Hg (IIa, SBP: NR, DBP: C-EO) and for the treatment of patients with HTN with CCB on the basis of improved GFR and renal survival. (IIa, B-R) The ACC/AHA HTN Guideline for 2017 also includes recommendations for patients with cerebrovascular disease, including acute intracerebral haemorrhage (ICH), acute ischaemic stroke (<72 h) and secondary prevention of stroke. In adults with ICH who are present with SBP of more than 220 mm Hg, it is reasonable to use continuous infusion of I.V. drugs and close BP monitoring for lower SBP. (IIa, C-EO) It is potentially harmful to immediately lower SBP to less than 140 mm Hg in adults with spontaneous ICH who are present within 6 hours of acute event; with an SBP between 150 mm Hg and 220 mm Hg does not reduce death or severe disability. (III [injury], A) Adults with acute ischaemic stroke and elevated pressure who are eligible for IV plasminogen activator therapy, before starting thrombolytic therapy, they should slowly reduce their BP to less than 185/110 mm Hg. (I, B-NR) BP must be less than 185/110 mm Hg before starting I.V. tissue plasminogen activator and should be maintained below 180/105 mm Hg for at least the first 24 hours after initiation of treatment with the medicinal products. (I, B-NR) Start or restart treatment during hospitalisation in patients with BP of 140/90 mm Hg or more who are neurologically stable is safe and reasonable to improve long-term BP control, unless contraindicated. (IIa, B-NR) In patients with BP 220/120 mm Hg or more who did not receive I.V. alteplase or endovascular treatment and did not have comorbid conditions requiring acute antihypertensive therapy, the benefit of initiator or re-treatment of HTN within the first 48-72 hours is uncertain. Bp could reasonably be reduced by 15% within the first 24 hours after the start of a stroke. (IIb, C-EO) In patients with BP less than 220/120 mm Hg who did not receive I.V. thrombolysis or endovascular treatment and did not have a comorbid condition requiring acute antihypertensive therapy, initiation or re-treatment of HTN in the first 48-72 hours after acute ischaemic stroke is not effective for preventing death or dependence. (III [no benefit], A) Treatment of HTN is preferably the most important procedure for secondary prevention of ischaemic stroke. Adults with previous HTN with a stroke or TIA should restart antihypertensive therapy after the first few days of the index event to reduce the risk of recurrence of stroke and other vascular events. (I, A) Treatment with a thiazide diuretic, ACE inhibitors or ARB inhibitors or combination therapy consisting of a thiazide diuretic and an ACE inhibitor is useful for these patients. (I, A) Adults who have not previously been treated for HTN who have a stroke or TIA and who have an established BP of 140/90 mm Hg or more should be prescribed antihypertensive therapy a few days after the index event to reduce the risk of recurrence of stroke and other vascular events. (I, B-R) The choice of antihypertensives should be based on the comorbidities of patients. (I, B-NR) For adults who experience a stroke or TIA, the BP target may be less than 130/80 mm Hg reasonable. (IIa, B-NR) In adults previously untreated for HTN who have ischaemic stroke or TIA and have BP less than 140/90 mm Hg, the on-starting of antihypertensives is not well established. (IIa, B-NR) Adults with peripheral arterial disease (PAD) and HTN should be treated in a similar way to patients with HTN without PAD. (I, B-R) For patients with atrial fibrillation, treatment of htn with ARB may be useful for preventing recurrence of AF. (IIa, B-R) In adults with asymptomatic aorta stenosis, HTN should be treated with low-dose pharmacotherapy and gradually titrated upwards as needed. (I, B-R) In patients with chronic aorta insufficiency, treatment of systolic HTN with drugs that do not slow down heart rate (i.e. avoiding beta-blockers) is reasonable. (IIa, C-EO) Beta blockers are recommended as preferred antihypertensive agents in patients with thoracic aorta disease. (I, C-EO) The ACC/AHA HTN Guideline 2017 identified specific patient groups, including those with racial and ethnic differences in treatment, differences in P.K. Carey R.M. Aronow W.S. et al. ACC/AHA/AAPA/ABC/ACPM/AGS/APHA/ASH/ASPC/NMA/PCNA guidelines for the prevention, detection, evaluation and management of high blood pressure in adults: Summary of executive work: Report of the American Cardiology Working Group/American Heart Association on Guidelines for Clinical Practice. In black adults with HTN but without HF or CKD, including diabetes, initial antihypertensive therapy should include a thiazide-type diuretic or CCB. (I, B-R) Two or more antihypertensive drugs is recommended to achieve a BP target of less than 130/80 mm Hg in most adults with HTN, especially in black adults with HTN. (I, C-LD) There is no evidence of gender interaction and treatment when addressing gender differences. In addition, no significant differences in CVD results were observed in large meta-analytes (31 randomised controlled trials with about 100,000 men and 90,000 women with HTN). However, antihypertensive adverse reactions were seen twice as often in women than in men in the mild hypertension study. For example, ace inhibitor and ccb oedema were observed more frequently in women than in men. Women were also more likely to have hypokalaemia and hyponatremia, and less likely to have goou with diuretics. Women with HTN who become pregnant or intend to become pregnant should be switched to methyldopa, nifedipine and/or labetalol.1Whelton P.K. Carey R.M. Aronow W.S. et al during pregnancy. ACC/AHA/AAPA/ABC/ACPM/AGS/APHA/ASH/ASPC/NMA/PCNA guidelines for the prevention, detection, evaluation and management of high blood pressure in adults: Summary of executive work: Report of the American Cardiology Working Group/American Heart Association on Guidelines for Clinical Practice. (I, C-LD) Please note that women with HTN who become pregnant should not be treated with ACE inhibitors, ARB or direct renin inhibitors due to the risk of foetal harm. (III [injury], C-LD) Figure 4Hypertension treatment for patients with hypertension and chronic kidney diseaseWhat the whole inscriptionObibrevijacia used: BP, blood pressure. For an uninstituted outpatient community-dwelling adult (≥65 y) with an average SBP of 130 mm Hg or more, treatment of HTN with an SBP treatment target of less than 130 mm Hg is recommended. (I, A) However, for older adults (≥65 y) with HTN and the high burden of comorbidity and limited life expectancy, clinical judgement, patient preferences and a risk assessment group versus benefit-based approach, they are reasonable for decisions regarding the intensity of BP reduction and antihypertensive selection. (IIa, C-EO) In adults with HTN, bp reduction is reasonable to prevent cognitive decline and demency. (IIa, B-R) Resistant HTN is defined as the patient's BP office above target (≥130/80 mm Hg) and the patient is prescribed three or more antihypertensive drugs at optimal doses, including diuretics, if possible; patient's office BP is on target, but the patient requires four or more antihypertensive drugs. It is important to exclude pseudoresia before diagnosing a patient with resistant HTN by providing accurate office BP measurements; assessing inconsistencies with the prescribed regime; and getting home, work or rescue BP readings to rule out the effect of the white coat. It is also important to identify and reverse or treat contributing lifestyle factors, which include obesity, physical inactivity, excessive alcohol intake and a high-fat diet with low fibre. Patients with HTN-resistant patients may take substances that contribute to increased BP. Providers should, inter alia, discontinue or reduce interfering substances such as non-violent medicinal products, sympathomimetics (e.g. amphetamines, decongestants), stimulants and oral contraceptives(Table 2). In addition, patients should be evaluated for secondary causes of htn and treated if possible (Table 2). Some of these causes and their signs of symptoms are primary aldosteronism (elevated aldosterone-renin ratio); CKD (eGFR < 60 ml/min/1,73 m2); renal artery stenosis (young woman, known atherosclerotic disease or worsening of kidney function); phenochromocytoma (episodic HTN, palpitations, diaphoresa, headache); and obstructive sleep apnoea (storage, eye-blind apnoea, excessive sleepiness in the day). Antihypertensive therapy Should be intected diuretic therapy u maximum dose dose and aldosterone antagonist, for example spironolactone. Other antihypertensive agents with different mechanisms of action can be added and optimized as a necessary measure. Diuretics should be applied preferentially to patients with CKD, cardiac retardation and/or patients receiving potent vasodilate (e.g. minoxidil). Figure 5Hypertension for patients with hypertension and a history of strokeThe full captionAbbreviation used: HTN, hypertension; BP, blood pressure; SBP; systolic blood pressure; DBP, diastolic blood pressure. Hypertensive nusions u BP (>180/120 mm Hg) associated with evidence of new and worse damage to the target organ. Cases of target organ damage include hypertensive encephalopathy, intracranial haemorrhage, acute ischaemic stroke, acute MI, acute left paved recess with pulmonary oedema, irresistible angina, aortic aneurysm, acute renal failure and eclampsia. In adults with hypertensive emergencies, it is recommended to be admitted to an intensive care unit for continuous monitoring of BP and target organ injuries and for I.V. administration of appropriate means. (I, B-NR) In these patients, the level of BP reduction depends on whether there are convincing conditions such as aorticecration, severe preeclampsia or eclampsia or phenocrototomom crisis. If any, SBP should be reduced to less than 140 mm Hg in the first hour to less than 120 mm Hg in the aorta section. (I, C-EO) In the case of none of the conditions, SBP must be reduced by not more than 25 % in the first hour; then, if stable, at 160/100 mm Hg over the next 2-6 hours; and then carefully over the next 24-48 hours. (I, C-EO) Hypertensive emergency rooms occur with severely elevated BP in otherwise stable patients without acute or imminent changes in target organ damage or dysfunction. These patients may have discontinued treatment or are not adhered to antihypertensive therapy, but have had no clinical or laboratory evidence of acute organ damage. These patients should be treated with re-administration or reinforcement of the oral antihypertensive regimen of the medicinal products and thereon until their BP is targeted. Since BP's control in the U.N. needs extensive improvements, what are some ways to optimize HTN control? Detention can be a big issue for patients with HTN, so a once daily and not multiple-daily dose of antihypertensives is useful for improving compliance.1Whelton P.K. Carey R.M. Aronow W.S. et al. ACC/AHA/AAPA/ABC/ACPM/AGS/APHA/ASH/ASPC/NMA/PCNA guidelines for the prevention, detection, evaluation and management of high blood pressure in adults: Summary of executive work: Report of the American Cardiology Working Group/American Heart Association on Guidelines for Clinical Practice. (I, B-R) The use of combination drugs rather than individual components may also be useful for improving compliance with antihypertensive therapy. (IIa, B-NR) In addition, effective behavioural and motivational strategies are recommended for adults with HTN to achieve healthy lifestyles (i.e., tobacco cessation, weight loss, moderation of alcohol intake, increased physical activity, decreased sodium intake and eating with a healthy diet). (I, C-EO) A group-based care approach (including pharmacists) is recommended for adults with HTN. (I, A) The use of an electronic health record and registry register is useful for identifying patients with undiagnosed or subjected to HTN (I, B-R) and for leading quality improvement efforts aimed at improving HTN control. (I, B-R) Tele-health strategies can be useful adjunks for interventions that show that they reduce BP for adults with HTN. (IIa, A) Performance measures combined with other quality improvement strategies are recommended at the level of patients, providers and systems that help facilitate optimal control of HTN. (IIa, B-NR) Quality improvement strategies at all levels can be effective in improving HTN identification and control. (IIa, B-R) Health system funding strategies (e.g. insurance and the creation of benefits for coayment) can also be useful in promoting better drug management and BP control in patients with HTN. (IIa, B-NR) The ACC/AHA HTN Guideline for 2017 provided a number of evidence-based recommendations, such as an update of the last HTN national guideline in 2003. Overall, BP's target was less than 130/80 mm Hg for all patients with the threshold at which treatment should be initiated varies. When antihypertensive drug therapy is initiated, the first drugs are thiazide diuretics, CCBs and ACE inhibitors or ARB. Many comorbid conditions impose when certain therapies should be used above others, and doctors should be aware of these overhangs. Resistant HTN can be problematic for some patients, and the new HTN guideline makes recommendations on how best to address it. Every adult with HTN should have a clear, detailed and current evidence-based care plan that ensures the achievement of treatment goals and self-management. This plan should promote effective management of comorbid conditions, immediate/timely monitoring of healthcare and follow guidelines-oriented care. (I, C-EO) This assessment should be accepted online; for further instructions, see the CPU information in the bottom sidebar. The online system will present these issues at random to help strengthen the learning opportunity. There is only one correct answer to each question. To obtain a 2.0 contact clock (0.2 ceus) CPU credit for this activity, you must perform an online assessment with a passer rating of 70% or better, complete the evaluation and CLAIM CREDIT on the . You will have two opportunities to successfully complete the assessment, and the questions will be in randomized order. The current policy of the APhA education department is not to publish the correct responses to any of our CPU tests. This policy is intended to preserve the integrity of THE ACTIVITIES of the CPU. Learning people who successfully complete this activity by the expiry date may receive a CPU credit. For your credit/transcription statement, visit the CPU Monitor. Assistance is available Monday through Friday from 8:30 a.m. to 5 p.m. ET at APhA InfoCenter at 800-237-APhA (2742) or e-mail infocenter@aphanet.org.ACC/AHA/AAPA/ABC/ACPM/AGS/APhA/ASH/ASPC/NMA/PCNA Prevention Guideline, detection, evaluation, i management of high blood pressure in adults: Executive Sažeci: Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines. 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