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Review Article **Published Date:-2018-11-23 00:00:00**

[Strategic Plans for Diagnosis, Treatment & Control of Hypertension](#)

Two major challenges face the practicing physicians and medical community regarding the management of hypertension. First is accurate diagnosis and finding who is the truly hypertensive patient in need of life-long treatment. Second is to improve blood pressure control through addressing hypertension risk factors, adherence to treatment and frequent monitoring.

- Current Challenges in Management

o Accurate diagnosis of hypertension

o Improving blood pressure control

- What Do We Need For The Future?

Research Article **Published Date:-2018-10-11 00:00:00**

[What is the Cost of Measuring a Blood Pressure?](#)

Rationale: Blood Pressure measurement has transitioned to the oscillometric method in most hospitals in the United States, however out-patient offices mainly use the auscultatory technique.

Objective: To determine time taken to measure blood pressure by an automatic oscillometric device compared to an auscultatory measurement device and to determine what each measurement costs.

Methods: Blood Pressures were measured in a single primary care office by medical assistants (MA) for patients seen for office visits. Timed measurements were performed using an automated oscillometric Welch Allyn Connex Vital Signs Monitor (WA) and manually using a Tycos device. A minimum of 400 readings were taken with each method.

Results: The average time to manually measure BP was 58.6 seconds, whereas the WA average was 39.8 seconds, 18.8 seconds faster ($p < 0.05$). There was an improvement in measurement time with MA experience with the WA device ($p < 0.05$). The average MA cost to measure a single BP using the manual method was \$0.35 vs. the WA method (\$0.24) or a savings of \$0.11 per measurement. The improvement with experience of WA method reduced cost to \$0.17 per measurement.

Conclusion: The oscillometric method saved 17cents per measurement potentially saving \$1,119 per year for our primary care practice.

Review Article **Published Date:-2018-07-17 01:00:00**

[Role of the Kidneys in the Regulation of Intra-and Extra-Renal Blood Pressure](#)

Hypertension is one of the most common chronic diseases of human, affecting more than one billion people worldwide. When it becomes chronic, hypertension leaves behind cardiac hypertrophy, heart failure, stroke, and kidney disease, resulting in substantial morbidity and mortality. Treatments that effectively reduce blood pressure can prevent these complications. Abnormalities in the production of urine by the kidneys have been implicated in increased vascular resistance, leading to high blood pressure and increased cardiac mass. By matching urinary excretion of salt and water with dietary intake, balance is usually attained, thereby maintaining a constant extracellular fluid volume and blood pressure. Based on the capacity for the kidney to excrete sodium, this blood pressure-altering mechanism should have sufficient advantage to limit intravascular volume and consequently lower blood pressure in response to a range of stimuli from elevated heart rate to increase peripheral vascular resistance. A major determinant of the level of intra- and extra- renal blood pressure is therefore sodium handling, and it is controlled by complex physiological mechanism by hormones, inflammatory mediators, and the sympathetic nervous system. Homeostasis and favourable influence sodium balance are a basic mechanism of efficacy for diuretics and dietary sodium restriction in hypertension. Renin Angiotensin System (RAS) inhibitors, vasodilators, and β -blockers work to facilitate pressure-natriuresis. Also, WNK signaling pathways, soluble inflammatory mediators, and pathways regulating extra-renal sodium disposition may be the focus towards elimination of sodium and reducing blood pressure in hypertension.

Review Article

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[Cardiovascular risk reduction: Past, present and future in Mexico](#)

Atherosclerotic cardiovascular disease (ASCVD) is globally defined as coronary heart disease, cerebrovascular disease, or peripheral arterial disease presumed to be of atherosclerotic origin and it is the leading cause of morbidity and mortality for individuals with or without diabetes and is the largest contributor to the direct and indirect catastrophic costs of cardiovascular disorder. Very common conditions coexisting into the cardiovascular risk (e.g., obesity, hypertension, diabetes and dyslipidemia) are clear risk factors for ASCVD, and diabetes itself confers independent risk. Numerous studies have shown the efficacy of controlling individual cardiovascular risk factors in preventing or slowing ASCVD in people with these disorders. In other words it is not enough control one risk factor. We need to develop novel strategies to detect and control all of them at the same time. Thus, large benefits are seen when multiple cardiovascular risk factors are addressed simultaneously. Under the current paradigm of aggressive risk factor modification in patients with cardiovascular risk, there is evidence that measures of 10-year coronary heart disease (CHD) risk among U.S. adults with cardiovascular risk have improved significantly over the past decade and that ASCVD morbidity and mortality have decreased. In Mexico the Mexican Institute of Social Security is implementing new strategies of primary and secondary prevention in order to confront this pandemic.

In this review, we analyze the state of the art to approach at the same time the different cardiovascular risk factors, in an integral form because of this is the real worldwide challenge of health.

Review Article

Published Date:-2018-04-09 00:00:00

[Guidelines that are just for guidance](#)

Hypertension (HTN) is a widely prevalent disease across the globe. Recent reports from National Health and Nutrition Examination Surveys (NHANES) indicate that the prevalence of HTN is 29% in adults more than 18 years in the US [1]. This is about 72 million adults. Worldwide, about 1.3 billion people are affected by HTN [2]. This number is projected to increase several-fold in the coming years. Given the huge burden of this disease to the healthcare system and the many deleterious effects that can result from uncontrolled HTN, we need strong guidelines to manage the same. The recently published 2017 ACC/AHA guidelines [3] on hypertension management are very meticulous and include a comprehensive stepwise approach in treating hypertension. Here we present a summary of the major changes and a concise review of the new guidelines.

Review Article

Published Date:-2018-03-07 00:00:00

[What is new in Hypertension of Mexico 2018? -Impact of the new classification of high blood pressure in adults from American College of Cardiology/American Heart Association \(ACC/AHA\)](#)

The new report of American College of Cardiology/American Heart Association task force on Clinical Practice Guidelines for High Blood Pressure in Adults was published online ahead of print November 13, 2017. The new American recommendation was focused on the criteria to define Hypertension. 130/80 mmHg or more is now considered as the new cut off point to define Hypertension. It is not new if we consider cumulative evidence in the last two decades has been broken the idea to consider 140/90 mmHg as the point to start medical actions. Thus, in México with current ACC/AHA definition it is estimated today around 48 million of adult hypertensive population. In the Mexican Institute of Social Security (IMSS) several strategies has been developed to improve prevention as the key action to confront non communicable chronic disease including hypertension. This updated guideline from ACC/AHA is an extraordinary opportunity to reinforce our preventive programs to high blood pressure control. In this brief report we analyze the epidemiological situation in Mexico and its possible consequences of the new criteria for hypertension diagnosis. The main current strategies that are applied into the IMSS to confront cardiovascular risk factors are directed to prevention. The IMSS is prepared to attend situations as the change of criteria diagnoses in Hypertension and new preventive models are in progression.

Research Article

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[Role of Home Blood Pressure Monitoring in Overcoming Therapeutic Inertia and Improving Hypertension Control in Mexico](#)

Hypertension remains the most common modifiable cardiovascular risk factor, however, control of hypertension rates remain dismal. Home blood pressure (BP) monitoring has the potential to improve the control of hypertension. Home BP monitoring is now defended evenly for the evaluation and management of hypertension. This paper shows the experience of the National Association of Mexican Cardiologist in a group of patients with hypertension under drug treatment to evaluate the control in a real world clinical practice in Mexico. One hundred and fifty one patients were included. They were followed during two weeks with three home measurements at day (8:00, 14:00 and 20:00hr). An Ambulatory blood pressure of 24hr was performed at the middle of study. At the end of the study 36% (54/151) patients still uncontrolled by systolic blood pressure (>135 mmHg) and 31% by diastolic blood pressure similar results were detected by ambulatory blood pressure. During afternoon and night uncontrolled values were more common. Home blood pressure monitoring, results in a better form to detect uncontrolled patients and help clinical judgment to adjust pharmacological therapy. This practice should be recommended in Mexico.

Research Article

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[Treating Blood Hypertension in a Brazilian Community: Moving from Reactive Homeostatic Model to Proactive Allostatic Healthcare](#)

The responsiveness of hypertensive subjects to different types of physical exercises and length of intervention, has been investigated in samples of our dynamic cohort study ("Move for Health" program) based on spontaneous demand for healthy lifestyle with supervised exercises and dietary counseling. After clinical selection and baseline assessments they were spontaneously assigned to exercise protocols of strength (PAC) isolated or combined with endurance (walking) exercises (PMi) daily or in alternated days(PMiA), hydrogymnastics(PHy) and tread mill high-intensity exercises(PHit), applied during 10(experiment 1) and 20(experiment 2) weeks of intervention. Baseline demographic, socioeconomic, anthropometric and physical activity and fitness characteristics were similar among protocols. Ten-week training improved VO₂max. Similarly in all protocols while hand grip increased only in PAC. In average, there was a 16% reduction rate of hypertension rate from baseline with both, SBP and DBP, reduced by PHy and only SBP by the PMi. After adjustments hypertension was more reduced by PAC, PMi and PHy. In the 20-week experiment, higher SBP was similarly reduced by PAC or PMiA and DBP by PMiA, after adjustments. Hence, so far, our generated data suggest physical exercises as an effective tool for hypertension reduction, from 10 weeks to 3 year-long supervised protocols composed by surface or aquatic activities with strength or endurance exercises. PAC takes longer and short-period responsiveness can be achieved by either combined (strength-endurance) or hydrogymnastic exercises. Thus, exercise training is a time-and type-dependent tool, feasible, costless and scientific-based rheostatic-allostatic alternative for the current "sick-care" drug-dependent homeostatic approach to hypertension med care.
