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NATIONAL HEALTH MISSION - TAMILNADU

**CORONA VIRUS (COVID-19)
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GUIDELINES FOR THE MANAGEMENT OF HYPERTENSION DURING COVID-19 PANDEMIC

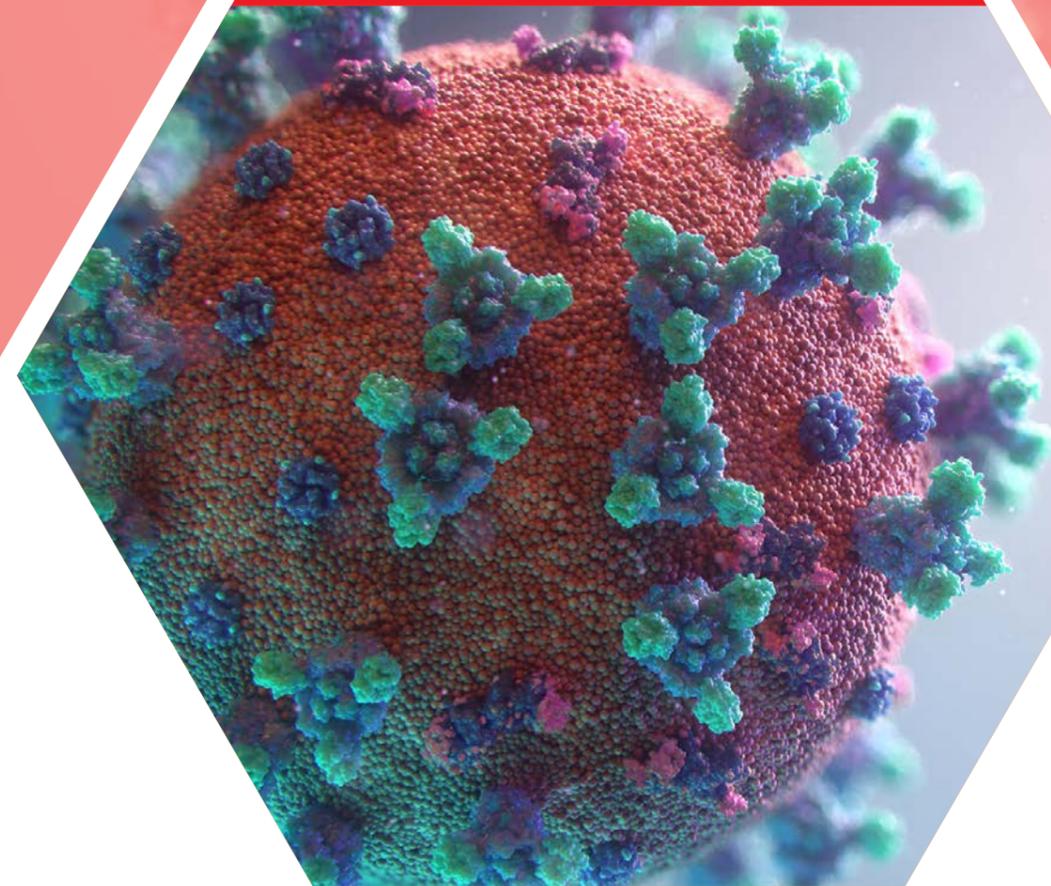


National Health Mission - Tamil Nadu

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**HYPERTENSION AND COVID
INFECTION**



**COVID-19 AND
HYPERTENSION**



HYPERTENSION AND COVID INFECTION

1. INTRODUCTION

The management of any Pandemic should not only focus on the disease as such but also on the associated co-morbid Conditions and high risk vulnerable groups.

This is particularly important in the COVID-19 Pandemic because the presence of co morbidities like Hypertension and Diabetes is a strong predictor of the disease related morbidity and mortality.

Considering the high prevalence of Hypertension and the rising COVID 19 Pandemic, the management of Hypertension finds an important place in the management of the Pandemic.

2. THE PATHOGENESIS OF COVID 19 INFECTION AND ITS IMPLICATIONS ON HYPERTENSION

Angiotensin Converting Enzyme 2 (ACE 2) is present in the Heart, Lungs and Kidneys. ACE 2 has a protective role on the Cardiovascular system by degrading Angiotensin II to Angiotensin (1-7).

SARS CoV-2 spike protein binds to ACE 2 which is present in the Heart and down-regulates and reduces the Cardio-protective effect of the ACE 2 enzyme.

The concern raised now is about treating with ACEIs which increases the level of ACE 2 thereby facilitating the penetration of SARS CoV-2 into the Cardiac cell.

3. GUIDELINES FOR THE ASSESSMENT OF HYPERTENSION IN COVID-19 PATIENTS DURING THE PANDEMIC

- Hypertensive patients who are COVID Positive should also undergo evaluation for other co-morbidities like Diabetes mellitus and Dyslipidemia
- Detailed Cardiac evaluation is also very important in COVID-19 positive Hypertensive patients as the presence of any pre-existing Cardiac diseases in them makes them high risk with the potential for increased mortality.



4. GUIDELINES FOR THE PHARMACOLOGICAL MANAGEMENT OF HYPERTENSION DURING THE PANDEMIC

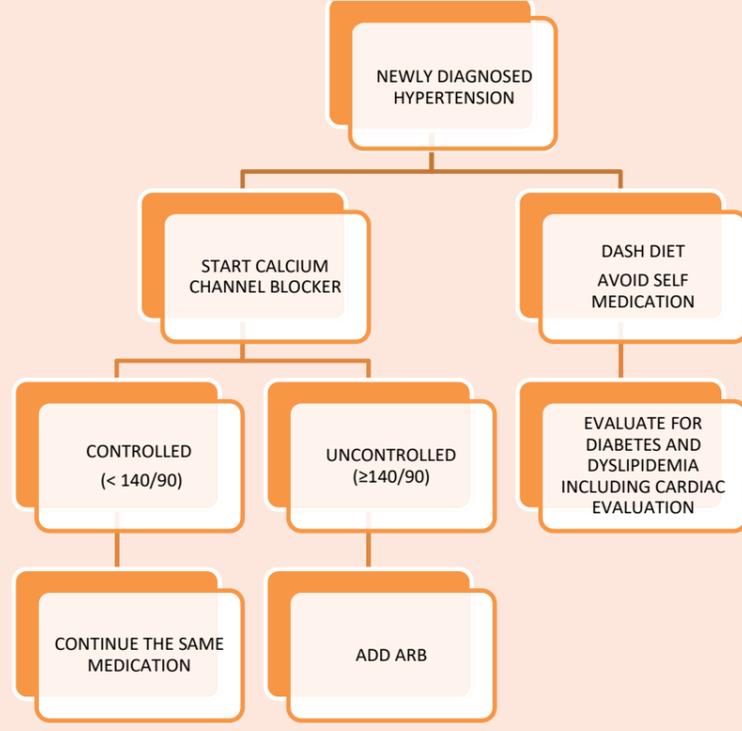
- If a patient is already on an ACE inhibitor or ARB group of drugs, the patient may continue the same as the effects of withdrawing these drugs may be more harmful while comparing with the benefits of stopping it. It has also been shown that some benefit in reducing the adverse Cardiovascular & Renal consequences due to severe COVID 19 infection.
- If a COVID-19 positive patient is already on Anti-hypertensives other than ACEIs or ARBs, the patients may continue the same with frequent monitoring of Blood pressure control.
- In COVID-19 patients with newly diagnosed Hypertension, the choice of drug depends on the clinical scenario. Both Beta blockers and ACEIs can cause respiratory symptoms like Bronchospasm and cough and hence not preferred as the first line drugs for initiating Anti-hypertensive therapy. Calcium Channel Blockers are the preferred drug of choice in this situation.
- Hypertensive patients who are already on CCB and not getting controlled, ARBs instead of ACEI may be added as the Second line of drug. ACEI is avoided in this situation due to its facilitation of penetration of the COVID-19 virus into cell.
- The target Blood Pressure to be achieved for control should be less than **140/90 mm Hg**.

5. NON PHARMACOLOGICAL MEASURES IN DEALING WITH HYPERTENSION DURING THE COVID 19 PANDEMIC

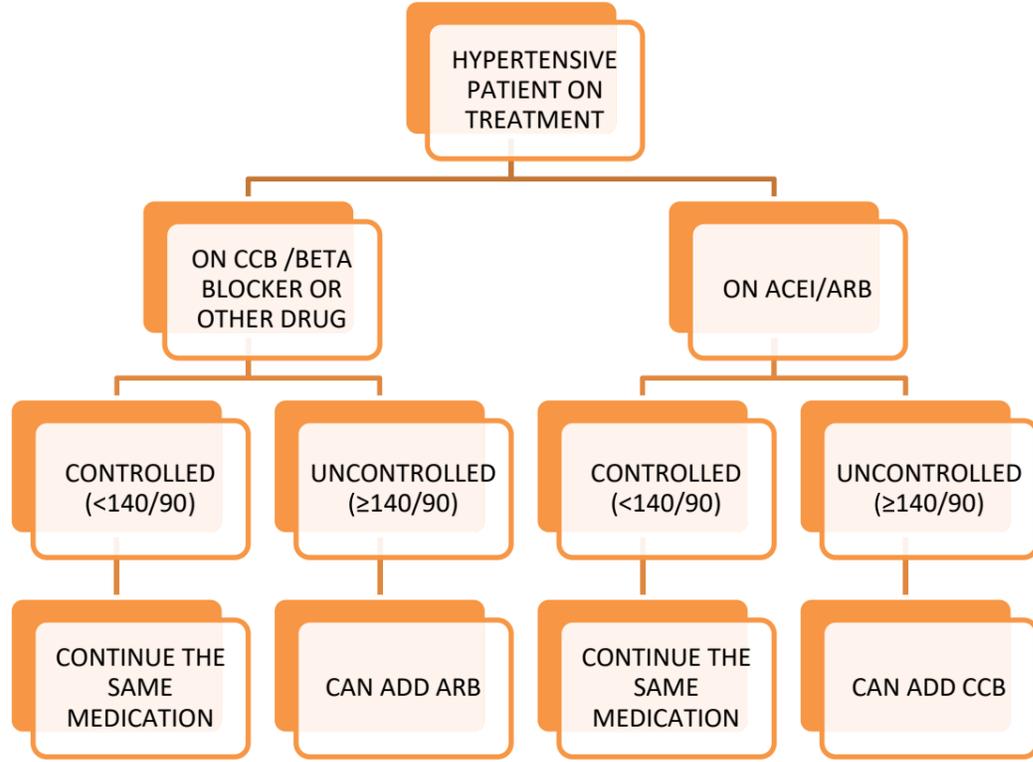
- Low salt diet, avoidance of Alcohol and smoking, low fat diet (Dietary Advice to Stop Hypertension-DASH) should be followed.
- Any warning symptom should be addressed like palpitation, swelling of legs, chest pain, headache, giddiness, etc.
- Self medication should be strictly forbidden as Over-the-Counter consumption of drugs especially NSAIDs and Steroids themselves increase blood pressure or may contain Sodium in their preparations which may further increase the Blood Pressure.



6. PHARMACOLOGICAL MANAGEMENT OF NEWLY DIAGNOSED HYPERTENSION IN COVID PANDEMIC



7. PHARMACOLOGICAL MANAGEMENT OF KNOWN HYPERTENSIVE PATIENTS IN COVID PANDEMIC



8. PROTOCOL FOR TREATMENT OF HYPERTENSION

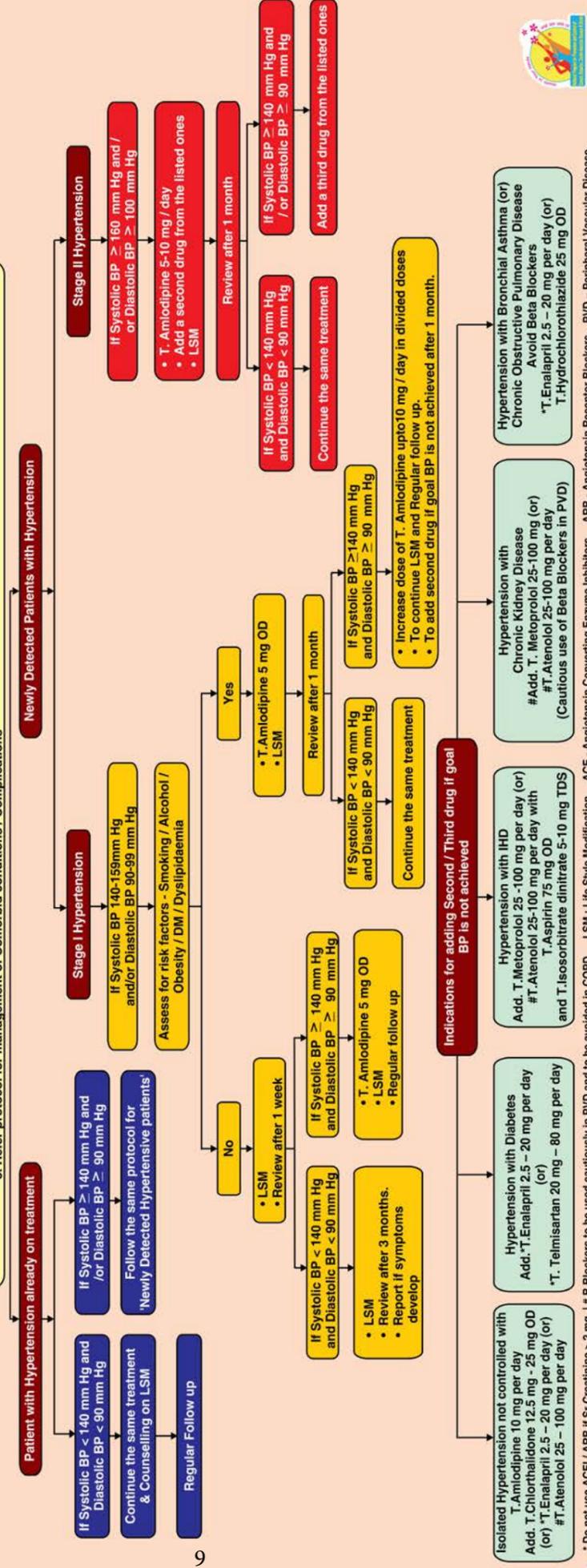


National Health Mission - Tamil Nadu National Program for Prevention and Control of Cancer, Diabetes, Cardio Vascular Diseases and Stroke (NPCDCS) Protocol for Treatment of Hypertension



Patient Clinic card : Start and maintain the Patient clinic card at the NCD clinic for all newly detected patients with Hypertension and also for known Hypertensive patients already on treatment

Assessment : 1. Take a detailed History for : Chest pain / Angina / IHD / TIA / Stroke / CCF / Diabetes Mellitus / CKD
2. To do : a) Waist Circumference b) Urine Albumin c) Blood Sugar d) Serum Cholesterol / Lipid profile e) Serum Creatinine f) Haemoglobin g) ECG
3. Refer protocol for management of Comorbid conditions / Complications



9. ACKNOWLEDGEMENT

We are thankful to the following Medical Experts and the supportive team for their invaluable contribution in the making of this brochure ;

1. **Dr. K. Senthil Raj**, IAS
Mission Director, National Health Mission, Tamil Nadu
2. **Dr. Hariharan**,
Director of Medicine, RGGGH & MMC, Chennai
3. **Dr. Narasimman**,
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4. **Dr. Arul Raj**, API
5. **Dr. Gunasekaran**, IMA
6. **Dr. Thambu David**,
HOD, Medicine, CMC Vellore
7. **Dr. Jerard M Selvam**,
State Nodal Officer NCD, NHM - TN
8. **Dr. Bharanitharan**,
TL - Deputy Director, TNHSRP
9. **Dr. Mohamed Harris**,
APO, NHM - TN
9. **Dr. Adithyan G.S.**,
Consultant, NHM - TN