

# Hypertension – Clinical Protocol

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## Assessment and Recognition

1. The staff and physician will identify individuals with a history of hypertension, those receiving antihypertensive medications, and those with identified complications of existing hypertension.
2. The staff and physician will identify individuals with possibly undiagnosed hypertension and those with poorly controlled hypertension.
  - a. Blood pressure should be measured correctly, including use of a properly sized cuff, in both arms and, where possible, in the upright position.
  - b. It is appropriate to monitor blood pressure over time and report trends or patterns instead of reporting or responding to isolated or intermittent readings. Isolated or intermittent blood pressure elevations may warrant additional monitoring, but they rarely warrant immediate interventions.
3. In addition, the nurse shall assess and document/report the following:
  - a. Vital signs;
  - b. General physical assessment, including level of consciousness, abnormal neurological signs, diaphoresis;
  - c. Resident's age and sex;
  - d. All current medications, especially antihypertensive therapy;
  - e. Recent or current history of chest pain, headache, change in level of consciousness, dizziness, diaphoresis;
  - f. All active diagnoses; and
  - g. Allergies.
4. The staff and physician will identify complications related to hypertension, such as a history of stroke, cardiomegaly, heart failure, retinal hemorrhages, renal failure, history of myocardial infarction, or accelerated cardiovascular disease.
  - a. Pertinent tests may include an electrocardiogram, renal function tests, electrolytes, calcium, and urinalysis. Other more specialized tests (for example, plasma aldosterone or renal arteriogram) may be ordered when an underlying cause is suspected based on clinical grounds.
5. The physician will help classify the severity of hypertension based on established criteria; for example:
  - a. Level 1: Systolic BP 140-159; diastolic BP 90-99.
  - b. Level 2: Systolic BP 160-179; diastolic BP 100-110.
  - c. Level 3: Systolic BP >180; diastolic BP >110.
  - d. Malignant or accelerated: sustained or sudden rise in systolic blood pressure above 220 mm Hg or diastolic blood pressure above 120 mm Hg, with accompanying evidence of end organ damage such as decreased renal function or encephalopathy.
  - e. Systolic: systolic pressure consistently greater than 140 mm Hg, with diastolic BP remaining below 90.
  - f. It is understood that there are various criteria for hypertension in literature and practice, and the physician will be able to define or treat as they feel appropriate, based on person-based practice with individual resident's health status and psychosocial needs being taken into consideration.

## Cause Identification

1. The physician will confirm the diagnosis of hypertension if it was not previously verified, and help identify pertinent causes and contributing factors.

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2. The physician will identify factors that may be causing or are associated with elevated or poorly controlled blood pressure; for example, hypercalcemia, excess salt intake, renovascular disease (such as renal artery stenosis), parenchymal renal disease (for example, glomerulonephritis), or endocrine disorders (for example, primary aldosteronism or pheochromocytoma).

### **Treatment/Management**

1. The physician will identify situations where hypertension should be treated, and will try to individualize treatment goals and blood pressure targets.
  - a. Treatment goals and blood pressure target ranges should be individualized based on considerations of causes, prognosis, comorbidities, risks of treatment-related complications, resident wishes, function, and quality of life.
  - b. In very old individuals, the risks of aggressive blood pressure reduction may outweigh the benefits.
2. The physician will treat hypertension based on established guidelines.
  - a. As much as possible, medications should be selected based on underlying causes, comorbidities, and potential risks. For example, clonidine increases the risk for depression and anorexia, which can be problematic in an already compromised resident.
3. The staff and physician will identify ancillary measures such as no added salt diets, weight reduction, smoking cessation, and increased exercise and activity.
4. Except in complicated or hard-to-control hypertension, markedly reduced (2 to 4 gram) sodium diets are rarely helpful and usually not well tolerated.

### **Monitoring and Follow-Up**

1. The staff and physician will periodically monitor the individual's blood pressure control and cardiac function (including complications) and the physician will adjust treatments accordingly.
  - a. This should generally be based on blood pressure measurements over time, not just on isolated readings or fluctuations.
2. For any individual whose blood pressure is not well controlled despite receiving three or more antihypertensive medications, the physician will reassess the situation and review the existing blood pressure treatment regimen carefully before prescribing any additional medications.
  - a. Existing medications may not be effective and adding more medications to a regimen that is not effective may increase side effects rather than help control blood pressure.
3. The physician will identify situations where consultative assistance in managing blood pressure is desired; for example, labile hypertension and/or identification or suspicion of less common, complex, or multiple underlying causes.
  - a. If a consultant is requested to help manage hypertension, the Attending Physician will retain an active role by reviewing the consultant's recommendations, addressing relevant medical issues, helping monitor for complications related to treatment, and evaluating subsequent progress.
  - b. The physician should not simply defer to the consultant for everything related to hypertension management.

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4. The staff and physician will monitor for complications of blood pressure treatments such as fluid and electrolyte imbalance, postprandial or orthostatic hypotension, dizziness, falling, anorexia, bradycardia, and depression.
  - a. Over-treating blood pressure may increase the risk of significant side effects and complications, such as falling and fractures, especially in frail older individuals.
5. If complications of treatment are identified, the physician should review the situation carefully and consider adjusting, stopping, or switching medications to those with a lower risk of clinically significant complications, or document why the current treatments are still warranted despite the risks.

References		
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