PLANK 2

**TOOL: Treatment Guidelines for Hypertension** (Sharp Rees-Stealy Medical Group)

**SHARP REES-STEALY CLINICAL GUIDELINES COMMITTEE**

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**Disclaimer:** Sharp Rees-Stealy clinical guidelines are designed to assist clinicians in the evaluation and treatment of the more common medical problem. They are not intended to replace clinical judgment or establish a protocol for all patients. The clinical approach described by this guideline will not fit all patients and will rarely establish the only appropriate approach to a problem.

**Initial Work-up for newly diagnosed HTN**

**Lifestyle Modifications**

**Not at Goal Blood Pressure <140/90 mm Hg (<140/80 mm Hg for Diabetes or < 130/80 for Chronic Kidney Disease)**

**Initial Drug Choices**

**Without Compelling Indication**

- **Stage 1 Hypertension** (SBP 140-159 or DBP 90-99 mmHg)
  - Thiazide-type diuretics for most. May consider ACEI, ARB, BB, CCB or combination.

**With Compelling Indications**

- **Stage 2 Hypertension** (SBP ≥160 or DBP ≥100 mm Hg)
  - 2-drug combination for most (usually thiazide type diuretic and ACEI or ARB, or BB or CCB. Consider starting diuretic first and adding second drug after monitoring for side effects).

**Drug(s) for the compelling indications**

- See compelling indications for the individual drug classes
- Other antihypertensive drugs (diuretics, ACEI, ARB, BB, CCB) as needed.

**Not at Goal Blood Pressure**

**Inadequate Response or Troublesome Side Effects**
- Substitute another drug from a different class

**Inadequate Response But Well Tolerated**
- Add 2nd agent from different class (diuretic if not already used)

**Not at Goal Blood Pressure**

- Optimize dosages or add additional drugs until goal blood pressure is achieved.
- Consider referral to nephrology if inadequate response to therapy on a combination of 3 agents

**Note:**
- Start with a low dose of a long-acting, once-daily drug and titrate dose.
- Low-dose combinations may be appropriate (ACEI + HCTZ or ACEI + CCB)

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*Initial Work-Up for Newly Diagnosed HTN*

Thorough History and physical including BMI, BP in both arms, listening for subclavian and renal bruits, retinal exam etc. If not done within the past year, check CBC, fasting BMP, LFT, lipid panel, TSH, UA, ECG. There is no need for an echocardiogram unless the ECG is abnormal or there is a physical exam abnormality such as an S3, murmur etc.

<table>
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<th>Compelling Indication</th>
<th>Initial Therapy options</th>
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<tr>
<td>Diabetes Mellitus (type 1) with proteinuria or &gt;1 CV risk factor¹</td>
<td>ACEI⁺</td>
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| Heart Failure | Asymptomatic: ACEI⁺ or BB (Carvedilol, Metoprolol Succinate)  
Symptomatic or End stage heart disease: ACEI⁺, BB (Carvedilol, Metoprolol Succinate) or Aldosterone antagonist + loop |
| Post Myocardial infarction | BB  
ACEI⁺ |
| Chronic Kidney disease | ACEI⁺  
Diuretic or ACEI⁺ |
| Recurrent Stroke prevention | |

*Use ARB if ACEI not tolerated |

*Lifestyle Modification Recommendations⁴*

- Lose weight if overweight. (Target BMI 18.5 – 24.9 kg/m²)
- Limit alcohol intake. Men ≤ 2 drinks/day or 30 ml (1 oz) of ethanol as contained in 720 ml (24 oz) of beer, 300 ml (10 oz) of wine), or 90 ml (3 oz) of 80-proof whiskey. Amount should be reduced by one-half in women and lighter weight men.
- Regular aerobic physical activity – at least 30 minutes per day, most days of the week.
- Reduce dietary sodium intake to ≤ 100 mmol/day (2.4 g of sodium or 6g of sodium chloride).
- Adopt a diet rich in fruits, vegetables and lowfat dairy products with reduced content of saturated and total fat.
- Smoking cessation.

References:
1. HOPE Study Lancet. 2000;355:253-259
2. SPRINT Cooperative Research Group. JAMA 1991; 365:3555