



**NEPHROLOGY PROGRAM  
DEPARTMENT POLICIES AND PROCEDURES**

**Hypertension - Section 04 - Clinical Practice - HTN Neph 4-04  
Direct Observation Therapy  
No.: 01586 (TOH Standardized Policy Number)**

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**ISSUED BY:**  
Hypertension Steering Committee

**DATE OF APPROVAL:**  
2014/11

**APPROVED BY:**  
Hypertension Steering Committee /  
Program Clinical Director and Division  
Head

**LAST REVIEW/REVISION DATE:**  
2016/06

**CATEGORY:**  
Clinical Practice

**IMPLEMENTATION DATE:**  
2014/11

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**POLICY STATEMENT:**

- To optimize the management and care of treatment-resistant hypertensive patients (defined as persistently high blood pressure despite prescribing optimal or best-tolerated doses of at least three different classes of antihypertensive drugs, one of which is a diuretic). Direct observation therapy (DOT), in which usual antihypertensive medications are given by nurses under supervision, is known to produce substantial reductions in blood pressure in patients with pseudoresistant hypertension caused by nonadherence to the prescribed drug therapy.<sup>1</sup> The evaluation of nonadherence to drug therapy is a crucial component in diagnosing resistant hypertension before considering alternative interventions.<sup>1,2</sup>

**DEFINITION(S):** N/A

**ALERT(S):** N/A

**PROCEDURE:**

**Section A:**

Prior Assessment to Include

1. Medical history as per Renal Hypertension Clinic procedure
2. Physical exam by Physician
3. Labs within 3 months: Lytes, Glucose, (HbA1C if DM) urea, Creat, CBC, Urine ACR

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4. Renal imaging where available
5. Allergy status & Adverse Drug Reactions (ADR)
6. Patient's pharmacy contact information (determine use of single or duplicate pharmacies)
7. Pharmacy prescription fill history for previous year from any/ all pharmacies the pt is using to help determine adherence to Rx therapy
8. Detailed list of past antihypertensive prescriptions including S/E profile and reason for discontinuation if available
9. Comprehensive list of current antihypertensive prescriptions including dose and frequency and usual administration times
10. Include consumption of other medications that may be contributing to their resistant hypertension. (i.e. BCP etc.)
11. Various drugs, including herbal remedies, either prescribed, available over the counter, or illicit, can interfere with the action of BP-lowering drugs, or directly contribute a pressor effect. (i.e. Licorice, Marijuana etc.)
12. Enquiry about concomitant medications is an important part of the evaluation of resistant hypertension (BHSOC)
13. Recent blood pressure measurements (office/home/ABPM). Determine validity of measurement provided

## **Section B**

### Pre: Direct Observation Therapy

1. Patient is booked into a RN/MD appointment for a 4-6 hour period as per MD to ensure patient concordance with therapies
2. Procedure should be repeated on 2-3 consecutive days, as determined by MD
3. It is important to confirm patient concordance with lifestyle and pharmacotherapy (see NICE Guidance CG127)
4. This is not always resolved by direct enquiry but may be established by measuring the BP response to directly observed ingestion of therapy in the clinic
5. DOT is followed by 24 hour APBM to establish the BP response to definitive treatment to help confirm resistance or not
6. Pt is advised by Physician, in written format, which medications are to be taken and which are to be held prior to DOT appointment
7. Physicain writes orders for pharmacy to dispense all Rx's to be administered by RN for DOT
8. Physician must be available at Riverside Campus for urgent assessment if required
9. Patient should be informed no fasting is required and they can eat during DOT

## Direct Observation Therapy

1. Assess weight and general status on arrival to clinic
2. Ensure understanding of procedure
3. Ensure patient has not taken any of the antihypertensives that were to be held prior to procedure and assess patient reported adherence in previous week
4. Measure arm circumference and choose appropriate size cuff
5. Initial Blood Pressure measurements: casual, resting and standing prior to administration of antihypertensives
6. Administer medications provided by TOH pharmacy as per physician's order noting time of ingestion
7. Ensure patient has swallowed medications
8. Monitor BP Q 30 minutes and PRN x 4-6 hours
9. Observe for any S&S of hypotension or ADR
10. Document on DOT Record
11. ABPM & teaching on D/C from DOT assessment to be returned the following day

**RELATED POLICIES / LEGISLATION:** N/A

### **REFERENCES:**

1. Ruzicka, McCormick, Leenen, Froeschl, & Hiremath. Adherence to Blood Pressure-Lowering Drugs and Resistant Hypertension: Should Trial of Direct Observation Therapy be Part of Preassessment for Renal Denervation? *Canadian Journal of Cardiology* 29 (2013),1741.e1-1741.e3
2. Calhoun DA, Jones D, Textor S, et al. Resistant hypertension: diagnosis, evaluation, and treatment: a scientific statement from the American Heart Association Professional Education Committee of the Council for High Blood Pressure Research. *Circulation* 2008;117:510-26

**COMMENTS / SIGNIFICANT REVISIONS:** N/A