Pilot Study of a Medometer Adherence Tool in Hypertensive Patients
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Results

**Medometer Adherence Tool**

- Patients with hypertension and taking at least one antihypertensive were asked to self-identify adherence using the Medometer tool
- The Medometer is a visual scale that resembles a speedometer and measures adherence to each medication on a scale of 0% (no doses taken) to 120% (extra doses taken) over the last 4 weeks
- Adherence measures were recorded for each medication and used as the basis for patient counseling and drug therapy recommendations made by the pharmacist

In the clinic patients are asked to select the percentage on the Medometer that best represents the number of doses they have taken over the last 4 weeks. The number is then repeated back to the patient as a number of missed doses over 4 weeks as clarification and the patient is asked to verify this number.

**Background**

- Medication adherence in patients with chronic diseases such as hypertension is often suboptimal1,2
- It is estimated that only 50% of patients are adherent to hypertensive treatments3
- Identifying and measuring nonadherence in the clinical setting is difficult1,2
- The Medometer is a nonadherence screening tool allowing for assessment of adherence to individual drugs3
- The tool has been used in a geriatric psychiatry population, but has not been tested in the hypertensive population3

**Objective**

- To 1) describe the use of the Medometer adherence tool in hypertensive patients, and 2) characterize interventions resulting from the adherence-based measurements

**Methods**

- IRB approved, retrospective review of patients interviewed by a clinical pharmacist or student pharmacists using the Medometer adherence tool
- From September – December 2014, patients in internal medicine and family medicine clinics were interviewed by a pharmacist or student pharmacist during routine clinical practice
- Inclusion criteria: All patients at the clinics taking at least one antihypertensive who were interviewed by the clinical pharmacist or pharmacy student using the Medometer nonadherence tool
- Exclusion criteria: Patients not interviewed by the clinical pharmacist or pharmacy student during routine clinical practice, and those patients unable to utilize the nonadherence tool

**Results**

- A total of 44 hypertensive patients were interviewed using the Medometer
- The average age was 58 years (range 24-83) and 68% of patients were female
- A total of 10 (23%) of the 44 patients had a controlled blood pressure (BP) per JNC 8 goals and the average blood pressure was 152/87 mmHg
- The average and median number of antihypertensive medications was 2 per patient with a range of 1-6
- Adherence to 93 total medications was measured and the average Medometer score was 81% (range 0-100%)
- Among 27 patients taking 2 or more antihypertensives, the Medometer identified 8 patients (30%) that had isolated problems with a specific medication
- The remaining patients had consistent adherence patterns across all medications
- Mean adherence was higher in patients with controlled BP
- Use of the Medometer allowed for targeted drug therapy interviews with drug therapy changes and patient counseling targeted to these findings
- Drug therapy changes were recommended 7 times in 5 of the 34 uncontrolled (15%) and 1 of 10 (10%) controlled patients with identified barriers to adherence

**Conclusions**

- The Medometer adherence tool provides useful information regarding antihypertensive adherence
- The Medometer can identify nonadherence with specific medications in the antihypertensive regimen
- This information can be used by pharmacists to collaborate with physicians and improve medication adherence and potentially hypertension outcomes
- Further study is needed to determine the effect on clinical outcomes

**References**


**Disclosure**

All authors have nothing to disclose