

May 22nd, 4:30 PM - 6:00 PM

# Patient Adherence to Laboratory Tests to Monitor Medication Therapy: A Mixed-Methods Study

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Fischer, Shira H.; Field, Terry S.; Gagne, Shawn J.; Mazor, Kathleen M.; Preusse, Peggy; Reed, George; Peterson, Daniel J.; Gurwitz, Jerry H.; and Tjia, Jennifer, "Patient Adherence to Laboratory Tests to Monitor Medication Therapy: A Mixed-Methods Study" (2012). *UMass Center for Clinical and Translational Science Research Retreat*. 1.  
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**Presenter Information**

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# **PATIENT ADHERENCE TO LABORATORY TESTS TO MONITOR MEDICATION THERAPY: A MIXED-METHODS STUDY**

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## **Abstract:**

### **Background**

Little is known about the contribution of patient behavior to incomplete laboratory monitoring and the reasons for patient non-completion of ordered laboratory tests remain unclear.

### **Objective**

To describe factors, including patient-reported reasons, associated with non-completion of ordered laboratory tests.

### **Design**

Mixed-methods study including a quantitative assessment of the frequency of patient adherence to ordered monitoring tests combined with qualitative, semi-structured, patient interviews.

### **Participants**

Quantitative assessment included patients 18 years or older from a large multispecialty group practice prescribed a medication requiring monitoring. Qualitative interviews included a subset of adherent and non-adherent patients prescribed a cardiovascular, anti-convulsant, or thyroid replacement medication.

### **Main Measures**

Proportion of recommended monitoring tests for each medication not completed, factors associated with patient non-adherence, and patient-reported reasons for non-adherence.

### **Results**

Of 27,802 patients who were prescribed one of 34 medications, patient non-completion of ordered tests varied (range: 0% to 29%, by drug-test pair). Factors associated with higher odds of test non-completion included younger patient age (< 40 years vs. ≥80 years, adjusted odds ratio [AOR] 1.52, 95% confidence interval [95% CI] 1.27-1.83), lower medication burden (1 medication vs. more than 1 drug, AOR for non-completion 1.26, 95% CI 1.15-1.37), and lower visit frequency (0-5 visits/year vs. ≥19 visits/year, AOR 1.41, 95% CI 1.25 to 1.59). Drug-test pairs with black box warning status were associated with greater odds of non-completion compared to drugs included only in the PDR (AOR 1.91, 95% CI 1.66-2.19). Qualitative interviews, with 16 non-adherent and 7 adherent patients, identified forgetting as the main cause of non-adherence.

### **Conclusions**

Patient non-adherence contributed to missed opportunities to monitor medications and was associated with younger patient age and lower medication burden and black box warning status. Interventions to improve laboratory monitoring should target patients as well as physicians.