



Common Medication Laboratory Monitoring

Based on the CMS State Operations Manual

The Centers of Medicare and Medicaid Services (CMS) has outlined guidance for medication monitoring within section F-329 Unnecessary Medications in the State Operations Manual. Below is a summary of the recommended laboratory monitoring parameters for common medications in the geriatric population. Keep in mind this is only a general guide to monitoring; each care plan will vary depending on the condition and the needs of each individual resident. Clinically complex residents may require more frequent or additional monitoring, while a stable resident may require less.

To see the full CMS guidance, please refer to Table 1 in F-329 starting on page 371 in the CMS State Operations Manual (see references).

<i>Medications</i>	<i>Labs</i>	<i>Monitoring Interval</i>	<i>Comments</i>
ACE-Inhibitors and ARBs	Serum potassium	Baseline, within in first month, and every 6 months	Also, monitor serum creatinine and BUN at initiation and regularly
Acetaminophen	LFTs	Every 3 months	Only for doses >4 grams/day
Amiodarone	LFTs, CBC, TSH	Every 6 months	Also requires annual eye exam, EKG, and PFTs
Anticonvulsants: Carbamazepine Phenytoin Phenobarbital Primidone Divalproex sodium Valproic acid	Serum medication levels	Every 6 months	If used to manage behavior, stabilize mood, or treat psychiatric disorders, refer to Gradual Dose Reduction guidance (GDR)
Antidiabetics Insulin Oral hypoglycemics	Serum glucose (point of care), Hemoglobin A1c	Every 6 months (A1c); more frequently for glucose monitoring	Metformin – monitor serum creatinine
Antifungals Imidazoles (systemic)	Increased monitoring with concomitant drug use: <ul style="list-style-type: none"> • Warfarin (PT/INR) • Phenytoin (serum levels) • Theophylline (serum levels) • Sulfonylureas (FBG) 	Based on interacting medications and clinical conditions	
Antipsychotics	FLP, Hemoglobin A1c	Every 6 months	If used to manage behavior, stabilize mood, or treat psychiatric disorders, refer to GDR guidance



<i>Medications</i>	<i>Labs</i>	<i>Monitoring Interval</i>	<i>Comments</i>
Digoxin	Serum digoxin level, BMP	Every 6 months	
Diuretics	BMP	Within the first month and every 6 months	
Fibrates	CBC, LFTs	Every 6 months	
Lithium	Serum lithium level	Every 3 months	Narrow therapeutic window; increased monitoring with drug interactions
Nitrofurantoin	Serum creatinine	Prior to initiation	Do not use for CrCL <60ml/min (SOM) or <40ml/min
Niacin	LFTs, serum glucose	Every 6 months	
Non-Steroidal Anti-Inflammatory Drugs	CBC, serum creatinine	Every 6 months	Exception: aspirin 81mg daily
Selective Serotonin Reuptake Inhibitors	Serum sodium	Baseline, dose increases, and annually	Monitor mood and refer to GDR guidance as well
Statins	LFTs	Baseline, 12 weeks post-initiation, and every 6 months	Monitor FLP for efficacy at least annually
Thyroid Medications Levothyroxine Liothyronine	TSH, T4	Baseline, at least 6-8 weeks after initiation or dose changes	T3 (instead of T4) should be monitored for liothyronine
Urinary Anti-Infective	UA and C&S	Required within 30 days of starting therapy	Prophylaxis medication is discouraged
Warfarin	PT/INR	Based on clinical circumstance; at least every 4 weeks	Checked more frequently with changes interacting medications

Key:

BMP: Basic metabolic panel
CBC: Complete blood count
C&S: Culture and sensitivity
FLP: Fasting lipid panel

LFTs: Liver function tests
PT/INR: Prothrombin time/International normalized ratio
TSH: Thyroid stimulating hormone
UA: Urinalysis

References:

1. State Operations Manual. Centers of Medicare and Medicaid Services. Available at: <https://www.cms.gov/Regulations-and-Guidance/Guidance/Transmittals/downloads/R22SOMA.pdf> Accessed Sept 2015.
2. Laboratory Monitoring Interval (in Months) Recommended for Chronic Medications, Table 2: Consult Pharm. 2008 May; 23(5): 387–395.