CLINICAL GUIDELINE:

STATIN ADHERENCE FOR PATIENTS WITH CVD

Physician Clinical Integration Network, LLC

Scope

Cardiovascular diseases (CVD) remain the primary cause of death globally. Of the estimated 17.9 million people who died from CVD in 2016, 85% were due to heart attack and stroke. [1] Excess LDL cholesterol is the most common risk factor for the initial development of CVD and is highly predictive of a recurrent event. [2] Multiple studies indicate major risk factors of arteriosclerotic cardiovascular disease (ASCVD) are advancing age, increased total serum cholesterol levels, increase non-HDL-C, increased LDL-C, low HDL-C, diabetes mellitus, hypertension, chronic kidney disease, cigarette smoking and/or a family history of ASCVD. [3]

Population included:

- Males 21-75 years of age or
- Females 40-75 years of age and
- Diagnosis of ASCVD and
- Dispensed a high or moderate-intensity statin medication

This guideline focuses on the HEDIS measure of statin adherence for patients with CVD in a high-risk age population who have been dispensed a high or moderate-intensity statin medication.

Statin	**Moderate-Intensity Dosage (LDL-C reduction 30% to <50%)**	**High-Intensity Dosage (LDL-C reduction >50%)**
Atorvastatin	10 to 20 mg	40-80 mg
Fluvastatin	40 mg 2x/day; XL 80 mg	NA
Lovastatin	40 mg	NA
Pitavastatin	2 to 4 mg	NA
Pravastatin	40 to 80 mg	NA
Rosuvastatin	5 to 10 mg	20 to 40 mg
Simvastatin	20 to 40 mg	NA

Guidance

The PCIN Quality Committee and its designees reviewed the available information in medical literature and societal guidelines on the evaluation and management for CVD patients in the primary care setting, as well as utilized information derived from their clinical practices to develop these guidelines.

Recommendations

- ✓ Simplify regimens by prescribing a single-pill combination rather than a multi-pill combination

- ✓ Prescribe 90-day supplies with automatic refills
- ✓ Advise patients to utilize pill boxes/organizers and set up reminders for when medications are due
- ✓ Evaluate patients' barriers to taking medication and suggest interventions for adherence (see Table 1 for evidence-based interventions)
- ✓ Assess adherence and percentage response to LDL-D lowering medications and lifestyle changes with repeat lipid measurement four to twelve weeks after statin initiation or dose adjustment, repeat every three to twelve months as needed
- ✓ Follow-up visit ever six months with provider
- ✓ Educate patients:
    - Potential side effects of statins
    - Importance of adhering to statin therapy due to CVD risk factors

Exclusions

- Males less than 21 years of age or greater than 75 years of age
- Females less than 40 years of age or greater than 75 years of age
- Patients dispensed a low-intensity statin medication or not dispensed any statin medication
- Hospice Patients
- Pregnant, ESRD, or cirrhosis patients
- Patients diagnosed with Myalgia, Myositis, Myopathy or Rhabdomvolvsis

Rationale

Research indicates both adherence and medication intensity directly affect the effectiveness of lipid-lowering therapy. A documented study showed patients receiving high-intensity statin therapy were more likely to be adherent than those receiving a low-intensity statin. Factors related to poor adherence were due to not taking the medication consistently (low compliance) or to early discontinuance (low persistence). In a study published by The Journal of the American Medical Association (JAMA), adherent patients on high-intensity statins resulted in a 40% lower risk of a CVD event compared to the 5% of nonadherent patients on low-intensity therapy. [4]

Suggestions to improve adherence for statin therapy include counseling by pharmacists and/or clinicians, simplifying regimens (single pill combination vs. multi-pill combinations), patient education, alarms or reminders, 90-day supplies, mail order, and/or automatic refills. [5]

Both patients and providers benefit from regular, ongoing feedback regarding performance on commonly established treatment goals for medication adherence. Additional benefits include identifying potential predisposing factors for a relapse into old behavior and setting appropriate and realistic goals for new behaviors. A collaborative approach to medication adherence should be in place and include the following steps: assessment of medication management capacity, including cognitive skills; collaboration to create and maintain a plan tailored to the patient's needs; education to explain the effects of medication and articulate why a regimen is important; and monitoring and evaluation of the plan for effectiveness. [7].

References

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5. Bui A, Kwon J, Kim J, Lucas A. Overcoming barriers to statin adherence. US Pharmacist.2019;44(6):19-22.
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Table 1 – Common Barriers and Evidence-based Interventions

Barrier to Knowing What To Do or Why	**Clinical Strategy to Improve Adherence**

Low health literacy
• did not understand instructions
• did not understand reason for medicines
• did not understand relationship between medicines and illness
• did not understand the expected duration of use
• could not fill pill organizer correctly
• did not understand where or how (for mail-in prescription refill) to obtain medications, and at what frequency
• Too much information
	• Use proven educational methods to give instructions:
	  • Written and verbal information at 3rd grade reading level
	  • Use pictures in addition to words
	  • Conduct a medication use skills check (e.g., teach – demonstrate – repeat and playback methods for filling pillbox)
	  • Ask patient to watch a short video on his medications and how to take them prior to leaving the office or while waiting
	• Give instructions to a second person (spouse or significant other, or community health worker)
	• Present 2-3 key points only; send complete list of medications and instructions in written, picture or audiovisual format
	• Use community liaison or pharmacist to reinforce information at a later time

Poor communication	• Engage clinic and provider staff in communication training
	• Engage patients in using e-health diaries (or written versions available online) to log concerns, side effects or symptom patterns
	• AVOID the following:
	  • overwhelming the patient with too much information
	  • using jargon and technical terminology
	  • relying on words alone
	  • failing to assess patient understanding

Negotiate agreement with the medication plan	• Simplify the dosing regimen • Explore the patient's activity and meal schedule, and preferences for dosing schedules • Altering the administration route • Using electronic adherence aids (MEMS cap) • Explore the patient's beliefs about the medication and how it works for him
Barrier to Doing	
No-fill of first prescription identified	• Dispense to the patient the first week of medications at discharge or in clinic • Identify a person to obtain medications for the patient following discharge / clinic visit • Discuss the patient's desire/willingness to take the new medication
Irregular refills obtained / forgetfulness	• Choose drug available in a calendarized blister-packaging • Enroll patient in a frequent follow-up program to receive reminder triggers from pharmacist • Use multiple frequent reminder trigger systems with the patient, including cell phone or home monitoring technology • Include a caregiver in the communication for reminders • Engage patient in an accountability partnership of his choice – contract, web-based or community support group • Obtain from pharmacy patient-based trends in fill-rate, and discuss feedback with patient
Cost prohibitive for the patient	• Select a different medication or a generic • Identify a local low-cost drug program (e.g., Walmart, Target) • Identify a payment program for non-generic drugs
"Non-responder" or no clinical evidence of effectiveness of the medication	• Ask patient about medication-taking using a validated assessment tool • Ask family caregiver or significant other • Use a controlled short term monitor (e.g., medication diary, electronic capture or MEMS cap) and re-evaluate drug response
Non-Preventable Discontinuation	**Clinical Strategy to Improve Adherence**
Serious mental illness (major depression; schizophrenia)	1. Attempt to treat mental health first; then resume other medication adherence / interventions and monitoring
Side effects (e.g., diarrhea, weight gain, sleeplessness)	1. Attempt to confirm drug-effect relationship 2. Alter medication choice (change drug class, change to new drug class) 3. Modify dose
Serious complications (e.g., allergic reaction)	1. Discontinue; change drug choice

[6].