Implementing Lipid-Lowering Therapeutics in Your Clinical Practice:

A Practical Guide for the Nurse Practitioner

AANP CLINICAL RESOURCE TOOL

The Scope of the Problem

Cardiovascular disease (CVD) is the **number one cause of death** in the United States — and the world.

More than 80% of CVD cases have atherosclerotic (ASCVD) origin.

According to the most recent data, some **25 million** Americans currently have ASCVD.

Clinical Pearl:

Always start with education on healthy habits and lifestyle changes. They are just as important as medication therapy — and in fact, they help lipid-lowering therapies work better!

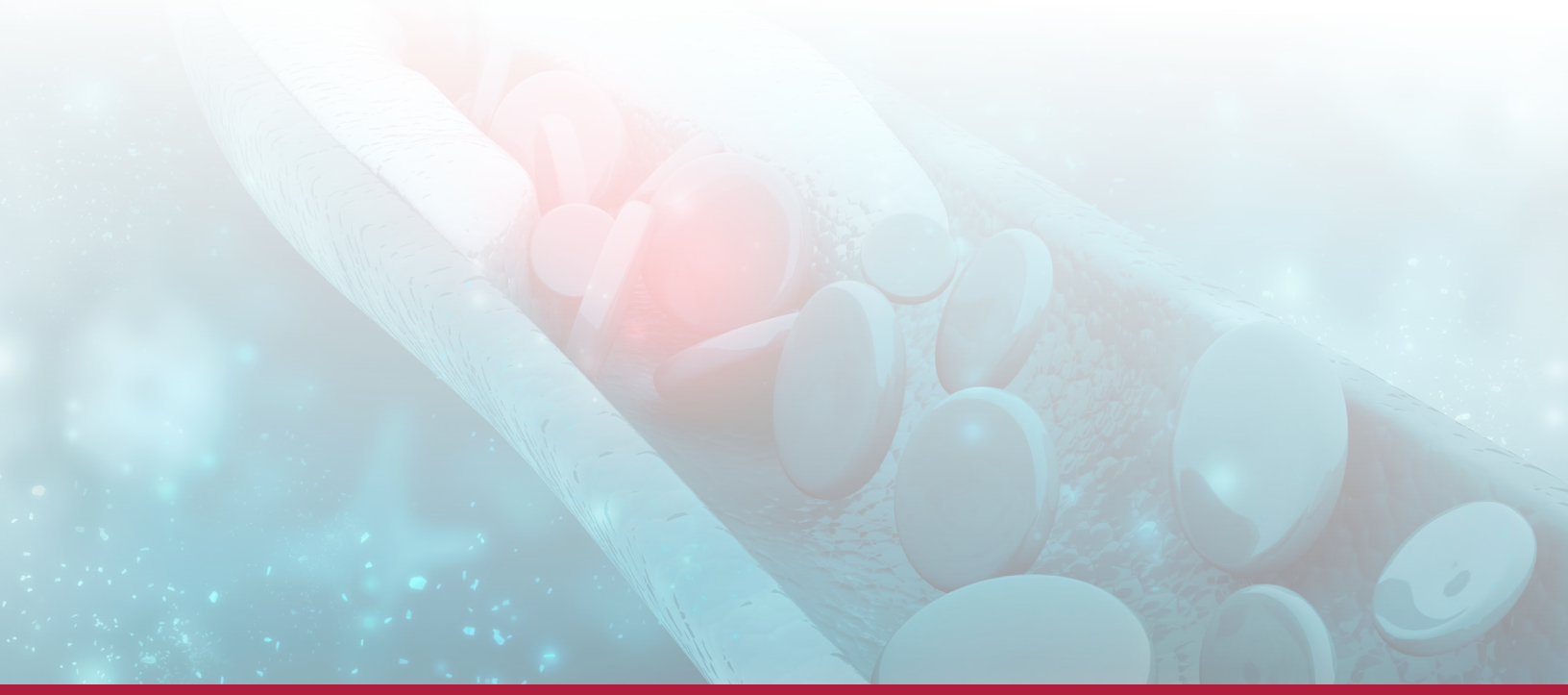
Cornerstones in Cholesterol Care:
A Review of Statin Therapies

Statins continue to form the cornerstone of best practice cholesterol management. They are not without shortcomings — not the least of which are statin-associated side effects (SASE), perhaps most notably statin-associated muscle symptoms (SAMS) — but statins offer considerable LDL-C lowering capacity and are recommended as first line therapy by current ACC/AHA/Multi-Society blood cholesterol guidelines.

Did You Know?

Statins are categorized according to their **"intensity"** level, as defined by their respective capacity to lower LDL-C. Currently available statins —organized according to low, moderate and high intensity — are summarized in the table below:

INTENSITY LEVEL	ANTICIPATED LCL-C REDUCTION (%)	AVAILABLE AGENTS
Low	<30%	Simvastatin 10 mg, Lovastatin 20 mg, Pravastatin 10-20 mg, Fluvastatin 20-40 mg
Moderate	30-49%	Atorvastatin 10-20 mg, Pravastatin 40-80 mg, Rosuvastatin 5-10 mg, Pitavastatin 1-4 mg, Simvastatin 20-40 mg, Fluvastatin XL 80 mg (or non-XL 40 mg twice daily), Lovastatin 40-80 mg
High	≥50%	Atorvastatin 40-80 mg, Rosuvastatin 20-40 mg

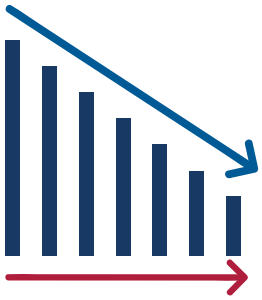


Selecting a Statin

Understanding statin intensity and LDL-C lowering capacity are critical because they directly inform treatment decision-making. On an individual patient basis, statin selection should be tailored according to guideline-directed clinical features and targeted to specific LDL-C thresholds. For example, high- or very high-risk individuals require high-intensity statin therapy to obtain the recommended LDL-C target. The addition of nonstatin lipid-lowering therapeutics (LLTs) should also be considered in very high-risk CVD and/or in patients who cannot tolerate a sufficient statin intensity to reach their LDL-C goal.

ADULT POPULATION	TARGET LDL-C	GUIDELINE-RECOMMENDED STATIN THERAPY INTENSITY
Optimal LDL-C for healthy adults	**<100 mg/dL**	
Patients with: • **No clinical ASCVD** • **Baseline LDL-C <190 mg/dL** • **10-year risk 7.5-19.9%**	**<100 mg/dL**	**Moderate Intensity** (Base on assessment of risk enhancers and patient-clinician discussion)
High-risk CVD, including those with: • **FH, with no prior event** • **T2D** • **Clinical ASCVD, with no high-risk features** • **10-year risk ≥20%** • **CAC>100 or ≥75th percentile for age and sex**	**<70 mg/dL**	**High Intensity (or maximally tolerated)**
Very high-risk CVD, including those with: • **Major ASCVD events (i.e., MI, stroke, recent ACS)** • **High-risk conditions (i.e., FH, T2D, HTN, CKD)**	**<55 mg/dL**	**High intensity (or maximally tolerated)** (Consider adding nonstatin LLTs as adjunct)

The latest guidance from the National Lipid Association (NLA) makes it quite plain:



when it comes to LDL-C management,

"LOWER FOR LONGER IS BETTER."

Clinical Pearl:

No LDL-C level is too low! Lower (including really low) for longer is always better!

Achieving LLT Adherence and Persistence

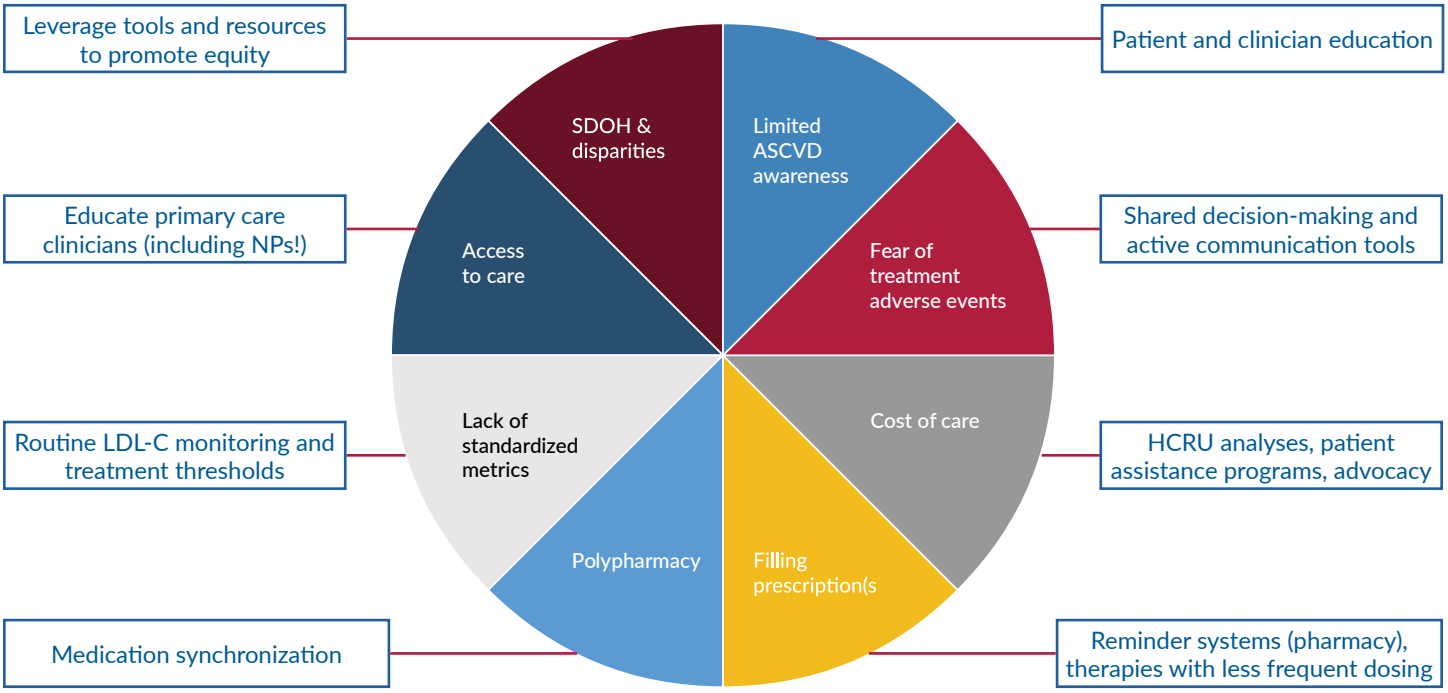
Did You Know?

80% of statin-eligible Americans, including those with established CVD, are NOT at their LDL-C goal!

The essential question, of course, is **why?**

According to a recent publication, "the major contributor to the failure of LDL-C management" in the United States is treatment nonadherence.

Barriers (and Solutions) to LLT Adherence



The Role of Nonstatin LLTs

Nonstatin LLTs are indicated alongside statins or as monotherapy in certain cases, including for patients who cannot tolerate a sufficient statin dose — and they also provide powerful tools in the ongoing effort to improve treatment adherence and persistence.

Clinical Pearl:

Assessing daily adherence is critical. And most patients are honest! If you ask them, "In the past two weeks, you should have taken 14 doses of your daily medication. How many doses do you think you took?" they will often tell you the truth. But here's the key — you have to ask!

Did You Know?

One of the primary ways nonstatin LLTs help improve patient adherence is through a reduced treatment burden. Nonstatin LLTs offer an extended dosing interval, with some agents only requiring administration every two weeks or every six months.

NONSTATIN AGENT	MECHANISM	LDL-C LOWERING CAPACITY	APPROVED INDICATIONS	DOSING SCHEDULE
Ezetimibe	Inhibits cholesterol absorption in GI tract	~23-24%	Reduce LDL-C in adults and peds 10 yrs and older in combo with statin for primary hyperlipidemia (including HeFH) + in combination with fenofibrate in adults with mixed hyperlipidemia	PO daily
Bile acid sequestrants	Inhibits bile acid reabsorption in intestines	~14-18%	Reduce LDL-C in adults with primary hyperlipidemia + reduce LDL-C in adolescents 10-17 years with HeFH	PO daily
Bempedoic acid	ATP citrate-lyase inhibitor	~15-30%	Reduce LDL-C either in combination or as monotherapy in adults with primary hyperlipidemia (including HeFH) + reduce risk of MI/CR in adults unable to take statins who have established CVD or are at high-risk for CVD events	PO daily
Inclisiran	Anti-PCSK9 siRNA	~50%	Adjunct to diet and exercise to reduce LDL-C in adults with hypercholesterolemia (including HeFH)	subQ Q6 months (after induction)
Alirocumab	Anti-PCSK9 mAb	~50-60%	Reduce LDL-C alone or in combo in adults (including HeFH) + reduce MACE in established CVD + reduce LDL-C in adults with HoFH, kids 8 and older with HeFH	subQ Q2 weeks
Evolocumab	Anti-PCSK9 mAb	~50-60%	Reduce LDL-C alone or in combo in adults (including HeFH) + reduce MACE in established CVD + reduce LDL-C in adults and ped 10 and older with HoFH or HeFH	subQ Q2 weeks

Clinical Pearl:

While extending dosing intervals are valuable, they do necessitate patient education and reminder strategies! (i.e., self-administer anti-PCSK9 mAbs every 2 weeks; come to clinic or pharmacy every six months for anti-PCSK9 siRNA)

Clinical Pearl:

Getting nonstatins approved by insurance can be a hurdle. Documenting the agent-specific FDA-approved indications, the patient's current lipid panel results and any prior SASE the patient might have experienced can help streamline the process.

Clinical Pearl:

Collaborative care is essential! Partner with multidisciplinary and/or interprofessional care team members every chance you can.

- Lipid specialists in your area — keep a list and leverage them as a resource for your patients.
- Specialty pharmacists — partner with them (if available) to expedite insurance approvals, linkage to patient assistance programs and provide patient/caregiver education.

Guidelines and Key References for NPs

2018 ACC/AHA/Multi-Society Blood Cholesterol Guidelines — https://www.ahajournals.org/doi/10.1161/cir.0000000000000625

2019 ACC/AHA Guideline on Primary Prevention of Cardiovascular Disease — https://www.ahajournals.org/doi/10.1161/cir.0000000000000678

2025 Guidance from the NLA: LDL-C Management Simplified in Adults — Lower for Longer is Better — https://pubmed.ncbi.nlm.nih.gov/40713232/

2023 NLA Clinical Perspective on Statin-Associated Muscle Symptoms — https://pubmed.ncbi.nlm.nih.gov/36115813/

2022 ACC Expert Consensus Decision Pathway on the Role of Nonstatin Therapies for LDL-Cholesterol Lowering in the Management of ASCVD Risk — https://www.jacc.org/doi/10.1016/j.jacc.2022.07.006

2023 AHA Guidance on Personalizing LDL-C Lowering Across the ASCVD Risk Continuum — https://www.ahajournals.org/doi/10.1161/JAHA.122.028892

Practical Guide for Improving Adherence to Lipid-Lowering Therapies — https://pubmed.ncbi.nlm.nih.gov/36267039/

Patient-Friendly Resource for Familial Hypercholesterolemia and Elevated Lp(a) — https://familyheart.org/

Access to Current FDA Product Labels — https://www.accessdata.fda.gov/scripts/cder/daf/index.cfm

AANP | American Association of NURSE PRACTITIONERS®

This activity is supported by educational grant funding provided by Amgen and Novartis.