



American
Heart
Association.



Ready



Set



Go!

Standardizing Lipid Management:

IMPLEMENTATION GUIDE

Ready, Set, Go!

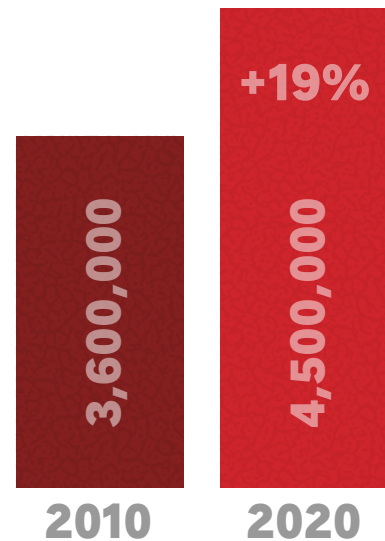


Standardizing Lipid Management:

IMPLEMENTATION GUIDE

In 2020, there were 4.5 million deaths attributable to high low-density lipoprotein cholesterol (LDL-C) worldwide¹. Compared with 2010, this represents a 19% increase in total number of deaths related to high LDL-C and underscores the **need for standardized care across health systems to manage lipids**.

The American Heart Association (AHA), as part of AHA's [National Integrated Lipid Management Initiative](#), has developed this easy-to-use guide to **evaluate** your organization's current practices, **develop** an effective lipid management plan and seamlessly **integrate** a lipid management policy into your current care practices.



¹Heart Disease and Stroke Statistics—2023 Update: A Report From the American Heart Association | Circulation (ahajournals.org)

How to use this guide...



Ready
EVALUATE

Get ready for success! This section will provide tools for self-evaluation, checklists to identify gaps and opportunities for improvement and example algorithms to model a patient care workflow



Set
DEVELOP

Prepare your teams and set the standard. This section will help inform the building of a standardized lipid management plan, systematize a team-based approach, provide tips for pharmacy engagement and feature audio resources to familiarize your care teams with current cholesterol guidelines and best practices.



Go!
INTEGRATE

Implement your well-organized lipid management plan aligning your system's lipid management pathways, providers, and patients toward reaching guideline-directed targets. This section will include scenarios of provider-patient conversations, tools for activating systems of care and solutions leveraging technology to address the implementation gap.



Ready > EVALUATE

The [2018 AHA/ACC Guideline on Blood Cholesterol](#) provides compelling evidence that standardized management of patients at risk for atherosclerotic cardiovascular disease (ASCVD) is critical. According to the guidelines, more than 100 million American adults have elevated LDL-C, a major modifiable risk factor for heart disease and stroke.

Developing a systemwide lipid management plan is essential to ensure your ASCVD patients receive appropriate screening, treatment, and follow-up care. Standardizing the process for identifying, evaluating and managing high-risk patients improves outcomes and quality of care across your entire patient population.

Self-Assessment

The first step in building a standardized care plan is to evaluate your current practices and identify areas for improvement. Begin by auditing a sample (10% or one month of patient volume) of ASCVD patient charts to determine how well your providers are following clinical guidelines for lipid screening, goal setting and medication management. Important considerations include:

1. Are LDL-C levels being documented at appropriate intervals?
2. Are patients on high-intensity statins when indicated?
3. Are non-statin therapies considered for patients not reaching LDL-C goals on maximally tolerated statin therapy?

Check it Out:

SELF-ASSESSMENT CHECKLIST

Start the conversation with your care teams using our new comprehensive checklist.

American Heart Association

Lipid Management Readiness Checklist
SELF-ASSESSMENT TOOL

Evaluate your current policies, care practices and patient pathways for guideline directed secondary prevention ASCVD care. The checklist below will allow you to assess gaps in care and opportunities for improvement when building and implementing your standardized lipid management plan.

These questions are designed to generate conversations with your internal teams to create a model for how your system will approach managing ASCVD patients.

<input type="checkbox"/> Is there a clear referral and handoff process to get ASCVD patients seen by lipid management specialists after an acute event?	<input type="checkbox"/> What EMR reports do you have available to you to view LDL-C trends on a system, patient prescribing rates and post-acute ASCVD event follow-up?
<input type="checkbox"/> Has staff been educated on current cholesterol guidelines ¹ for secondary prevention of ASCVD?	<input type="checkbox"/> Is there an effective process for identifying patients who would benefit from more intensive lipid therapy?
<input type="checkbox"/> Does the lipid management plan development consider lifestyle modification, medication titration and re-evaluation and patient education?	<input type="checkbox"/> Are patient's baseline LDL-C levels measured and monitored regularly? What is your criteria for rechecked testing for patients not at target goal?
<input type="checkbox"/> Can shared management of ASCVD patients be improved, especially with primary care doctors and specialists?	<input type="checkbox"/> Is the role of statins and other lipid-lowering therapies in reducing ASCVD events understood by all prescribers?
<input type="checkbox"/> Are barriers to medication adherence and lifestyle changes assessed?	<input type="checkbox"/> What role could community resources play in managing ASCVD patients?
<input type="checkbox"/> What decision support tools and patient aids are used for shared decision-making?	<input type="checkbox"/> Do you have a uniform goal of LDL-C < 70 mg/dL for secondary prevention ASCVD patients in all clinics?

© 2018 AHA

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Ready

Defining Goals

Establishing metrics for self-monitoring can ensure that guideline-directed care is being delivered at all points across your system. For ASCVD patient management, evaluating gaps in lipid monitoring, LDL-C control and appropriate referrals for lipid management can assist providers in decision-making and help a health system allocate resources for better quality care.

Key metrics may include:



REFERRAL FOR LIPID MANAGEMENT

Of all ASCVD patients with an LDL > 70 mg/dL, how many are being referred to a provider to appropriately manage lipids?



MONITORING LDL-C FOR ASCVD PATIENTS

Of all ASCVD patients, how many are receiving regular lipid screenings in concordance with the guidelines?



STATIN USE FOR ASCVD PATIENTS

Of all patients with diagnosed ASCVD, how many patients are on a (high-intensity or otherwise) statin?



LDL-C CONTROL FOR ASCVD PATIENTS

Of all very high-risk ASCVD patients, how many currently have LDL-C > 70 mg/dL?

Leveraging internal analytics departments (if applicable) can assist in building key metrics for deeper understanding and alignment of lipid management goals across the system.

Evaluating Care Pathways

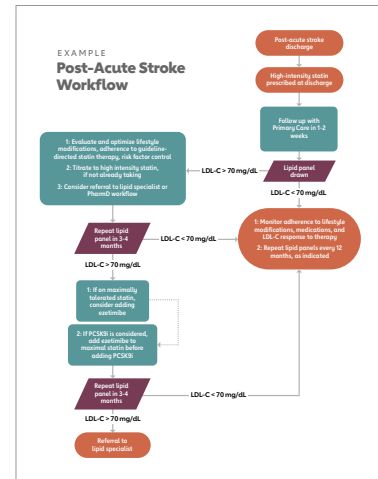
Understanding how your patients move through your systems is critical to establishing ownership of the ASCVD patient's lipid-lowering care. Oftentimes, there is no set "responsible party", which can lead to fragmentation and poor patient outcomes. Standardization is a crucial step in ensuring a seamless patient journey and experience with improved alignment and communication across departments.

Ready

Pro Tip:

CREATE AN ALGORITHM!

Evaluate your current patient journey by creating an algorithm informed by your self-assessment (above). Using a patient algorithm can assist in finding points of care to leverage technology through order sets or best-practice alerts and can streamline workflows to the appropriate managing provider. This Post-Acute Stroke Workflow example is a template that can be used appropriately based on your hospital and/or clinics resources for post-acute ASCVD discharges.



[Click to open](#)

AHA'S COMMITMENT TO HEALTH EQUITY

Improve Health Outcomes:

The Health Equity portfolio on the Professional Education Hub is one of the main key drivers of AHA's 8th Commitment, as a solution for clinicians, health professionals and scientists to remove barriers/bias that affect health outcomes.

Addressing Equity

Health equity and social determinants of health play an important role in the care and management of patients with ASCVD. There is a growing need for a renewed focus and concerted effort to improve health equity for patients, particularly those from underserved communities. Addressing social determinants that impact access to quality care, medication adherence and lifestyle changes could help reduce disparities and improve cardiovascular health for vulnerable ASCVD populations.

The American Heart Association equips professionals with the tools, resources, and knowledge to begin addressing health equity in your institution with CME course offerings. Visit AHA's [Health Equity for Health Care Professionals](#) to learn more.



Lipid Management: The Importance of Bridging the Gap

Keith Ferdinand, MD, Chair in Preventive Cardiology and Professor of Medicine at Tulane University, joins for a must-listen podcast discussing the need for equitable care and how he approaches breaking down bias barriers.



Set > DEVELOP

Now that you have self-assessed and identified the gaps in your current process, **Set** is intended to prepare your team and set the standard. This section will help inform the building of a standardized lipid management plan, standardize a team-based approach, provide tips for pharmacy engagement and provide audio resources to familiarize your care teams with current cholesterol guidelines and best practices.

Guideline-Directed Medical Therapy (GDMT)

For patients with established ASCVD, the [2018 AHA/ACC Guideline on the Management of Blood Cholesterol](#) divides patients with clinical ASCVD into high-risk (patients with stable ASCVD and are treated with high-intensity statins) and very high-risk categories (those with ASCVD plus other high-risk conditions²). The purpose of the guideline is to address the practical management of patients with high blood cholesterol and related disorders.

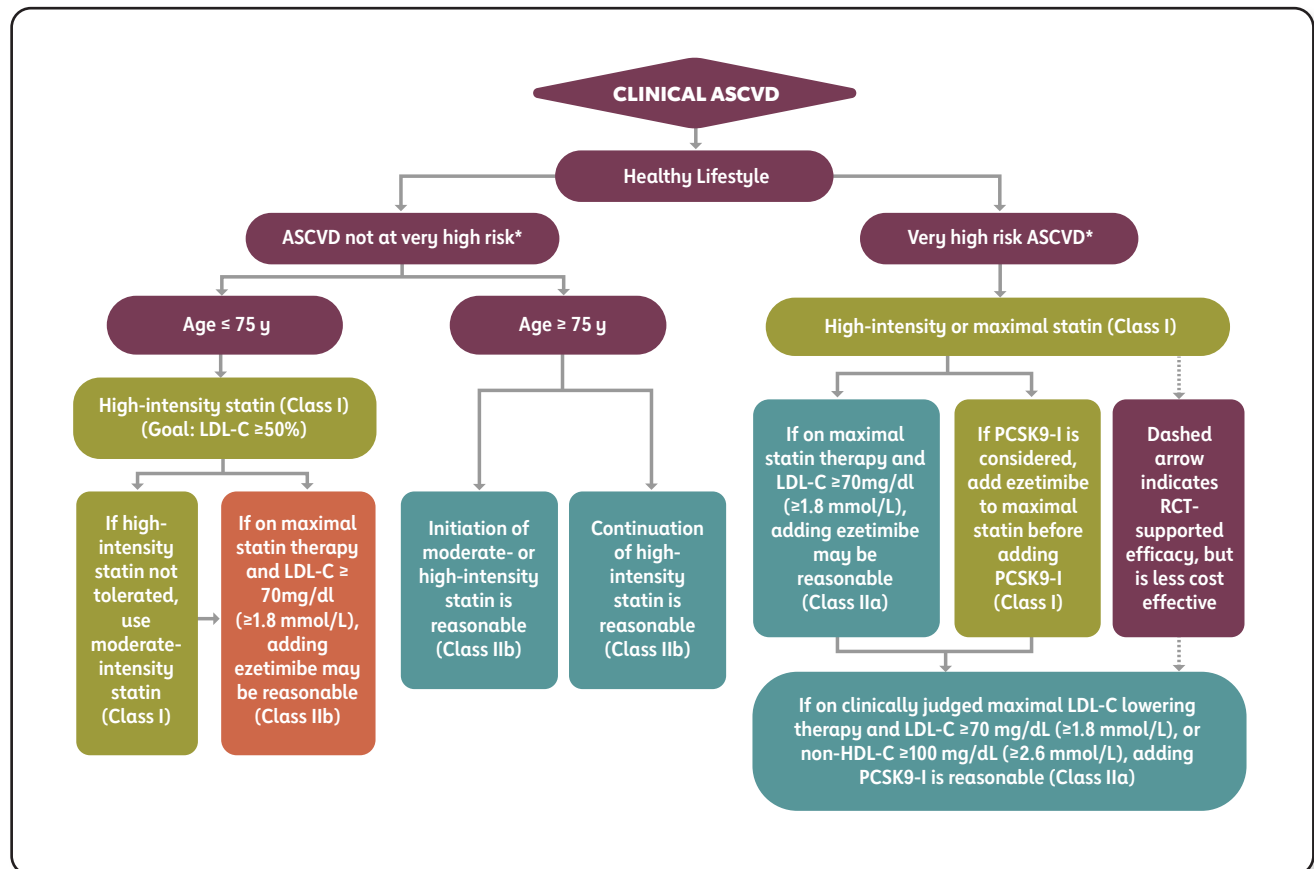
VERY HIGH-RISK OF FUTURE ASCVD EVENTS
Major ASCVD Events
Recent ACS (within the past 12 months)
History of MI (other than recent ACS event listed above)
History of ischemic stroke
Symptomatic peripheral arterial disease (history of claudication with ABI <0.85, or previous revascularization or amputation)
High Risk Conditions
Age ≥65 yrs.
Heterozygous familial hypercholesterolemia
History of prior coronary artery bypass surgery or percutaneous coronary intervention outside of the major ASCVD event(s)
Diabetes mellitus
Hypertension
CKD (eGFR 15-59 mL/min/1.73 m)
Current smoking
Persistently elevated LDL-C (LDL-C ≥100 mg/dL [≥2.6 mmol/L]) despite maximally tolerated statin therapy and ezetimibe
History of congestive HF

²Grundy SM, et al. 2018 AHA/ACC/AACVPR/AAPA/ABC/ACPM/ADA/AGS/APhA/ASPC/NLA/PCNA guideline on the management of blood cholesterol: a report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines. *Circulation*. 2019;139:e1082–e1143. DOI: 10.1161/CIR.0000000000000625.

Set

Clinical Guideline for Secondary Prevention of ASCVD Treatment Algorithm

To learn how to apply these guidelines to routine patient care, check out our easy to use [pocket guide](#).



PODCAST

Click to listen (19 min.)

Roadmap to ASCVD Treatment

In this podcast episode, Murtuza Ali, MD, Professor of Clinical Medicine, Louisiana State University School of Medicine, walks the audience through the algorithm for treatment to guidelines as well as address the barriers, pitfalls and potential solutions in managing care.



VIDEO

Click to watch (57 min.)

Practical Insights for Cholesterol Guidelines for Secondary Prevention of ASCVD

Led by Salim Virani, MD, FAHA, Professor of Medicine at Baylor College of Medicine, to understand the concepts of thresholds of LDL-C to consider initiation of non-statin lipid-lowering therapy, identifying “very high-risk” ASCVD patients and system-level gaps in lipid management.

Set

Incorporating Pharmacists in ASCVD Management

Pharmacists have been shown to have a positive impact on lipid management. In fact, studies show that the management of dyslipidemia by a clinical pharmacist is associated with an 18.5% reduction in overall mean LDL-C³. Most pharmacists can work under collaborative practice agreements where they can modify medication for the referred patients. Health care providers such as primary care physicians and specialists can refer patients to these trained and board-certified clinical pharmacists to continue monitoring and treatment.

The Role of Pharmacists in ASCVD Management:

- Review entire drug regimen for efficacy and safety
- Modify/drug therapy optimization
- Order/monitor lab tests
- Assess for medication adherence
- Educate on disease/medications
- Document and communicate with the care team



Benefits of Integrated Pharmacists in ASCVD Management

Michelle Lee Chu, PharmD, Assistant Professor of Clinical Pharmacy, USC Alfred E. Mann School of Pharmacy, walks us through the integral role pharmacists play on a care team for ASCVD patient medication management.

Building Your Care Teams

A team-based approach to ASCVD prevention may result in significant improvements in patient outcomes and often meets patient needs better than standard care, especially in low-resource settings and among vulnerable populations⁴.

By working together, the care team can leverage each member's expertise to optimize treatment plans and identify risk factors that may require intervention from different specialties. For example, a dietitian can recommend dietary changes to lower cholesterol and blood pressure, while a physical therapist can design an exercise program to improve heart health. The cardiologist can then modify medications based on these lifestyle changes. The synergies created allow the team to achieve more for the patient than any one specialist could alone. The result is improved disease control, quality of life and better outcomes for patients with complex conditions.



Lessons from an Academic Perspective- Sharing Ownership of Reducing ASCVD Risk

Join a panel discussion with the University of Virginia Health to learn about how different specialties can collaborate to provide optimal care for patients with known ASCVD.

³Till LT, Voris JC, Horst JB. Assessment of clinical pharmacist management of lipid-lowering therapy in a primary care setting. *J Manag Care Pharm.* 2003 May-Jun;9(3):269-73. doi: 10.18553/jmcp.2003.9.3.269. PMID: 14613471; PMCID: PMC10437297.

⁴2019 ACC/AHA Guideline on the Primary Prevention of Cardiovascular www.ahajournals.org/doi/10.1161/CIR.0000000000000678

Set

AHA'S ASCVD INITIATIVE INSIGHTS FOR TEAM-BASED CARE

- Health system uses discharge order sets to ensure all post-acute ASCVD patients leave with a cardiology and primary care appointment.
- Health system delegates much of ASCVD patient's medication management to pharmacy team through a collaborative practice agreement.
- Health system leverages internal wellness team dedicated to find efficiencies and implement workflows across primary care, neurology, and cardiology service lines for ASCVD patients.
- Health system regularly conducts pharmacy-led "lunch-and-learns" to review guideline-directed therapies and how to navigate barriers to prescribing non-statin lipid lowering therapies.

CASE STUDY: The Patient with a History of Stroke

A 62 year old woman with diabetes, hypertension and recent ischemic stroke. Long standing use of pravastatin 20 mg and aspirin 81 mg without side effects. Clopidogrel added for ischemic protection. Has seen neurology and her PCP once since discharge

CHALLENGES?

- ASCVD patient not followed in Cardiology
- Need for high intensity statin therapy for persons with non-CHD ASCVD

OPPORTUNITIES?

- Potential for global ASCVD protection with statin
- Strategies to support capturing patients outside of Cardiology requiring high intensity statins

In this case, primary care and neurology are jointly managing this patient. Additional care team support may include:

- Integrated pharmacy management
- Cardiology
- Endocrinology
- Nurse navigators



VIDEO

Click to listen (32 min.)

Secondary Prevention of Atherosclerotic Cardiovascular Disease & the Importance of LDL-C Management

Join Chiadi Ndumele, MD, PhD, FAHA, Director of Obesity and Metabolic Research and Associate Professor of Medicine at Johns Hopkins University as he walks us through the importance of LDL-C management with enlightening case studies for deeper learning.



Go! > INTEGRATE

In addition to getting your site **Ready** through self-evaluation and your lipid management strategies **Set**, you can now prepare to successfully **Go** by implementing your workflows and process improvements. This section culminates the systems organizational strategies to provide a roadmap to operationalize lipid management care pathways to reach guideline-directed targets.

Implementing a standardized lipid management workflow within a health system or clinic system is an important first step to help more patients achieve cholesterol goals. A successful system involves:

- identifying high-risk patients,
- developing evidence-based treatment guidelines,
- establishing protocols for follow-up testing and medication titration and
- tracking performance metrics.

Disseminating this protocol to all providers, nurses, care coordinators and pharmacists is key, so everyone is on the same page and patients receive consistent care.

Provider to Patient Engagement Strategies

The benefits of strong provider engagement include increased physician productivity, overall improvement in organizational performance, increased connections and in-network referrals, less patient fallout and a more competitive standing in the industry⁵.



PODCAST SERIES

Click to listen

ASCVD Perspectives Podcasts

The ASCVD podcast series is intended to be a guide to educate patients on shared decision-making practices around their ASCVD diagnosis and provide examples of questions they can incorporate into their personal care.

The podcasts also serve as a model to help clinicians understand different methods of communication that can empower their patients to become advocates and active leaders in their own disease management.

**Need more information
about empowering
your patients?**

Visit [Empowering Patients: Promoting Patient Education and Health Literacy](#)

⁵[www.aapc.com > blog > 82808-strategies-for-physician-strategies-for-physician-engagement-and-education-aapc...](http://www.aapc.com/blog/82808-strategies-for-physician-strategies-for-physician-engagement-and-education-aapc...)

Go!

Cohesive Approach to Activating Systems of Care

Harnessing health information technology optimizes care delivery and clinical outcomes for patients with dyslipidemia. Examples of activating on existing systems of care might look like:

- Electronic health records and patient registries to enable identification of patients who would benefit from a lipid management plan
- Clinical decision support tools within electronic health record systems prompting providers during visits to order suitable tests and initiate or modify treatments
- Nurses and care coordinators to conduct targeted outreach to high-risk patients, provide medication and lifestyle counseling and schedule follow-up appointments
- Pharmacists reviewing medication lists to identify potential drug interactions and ensure patients are taking medications properly

By activating the entire care team and embedding protocols within systems, more patients achieve their cholesterol goals and reduce risks of cardiovascular events.



[Click to listen \(19 min.\)](#)

The Next Top Model: Activating & Improving Systems of Care- Podcast

Tracy Yu-Ping Wang, MD, MHS, MSc, Associate Professor of Medicine at Duke University discusses the challenges facing ASCVD patients as they move through inpatient to outpatient settings and tips to engage families in the care and management of the newly diagnosed patient.

MUST WATCH!



[Click to watch \(58 min.\)](#)

Innovative Lipid Management Strategies for ASCVD Risk Reduction

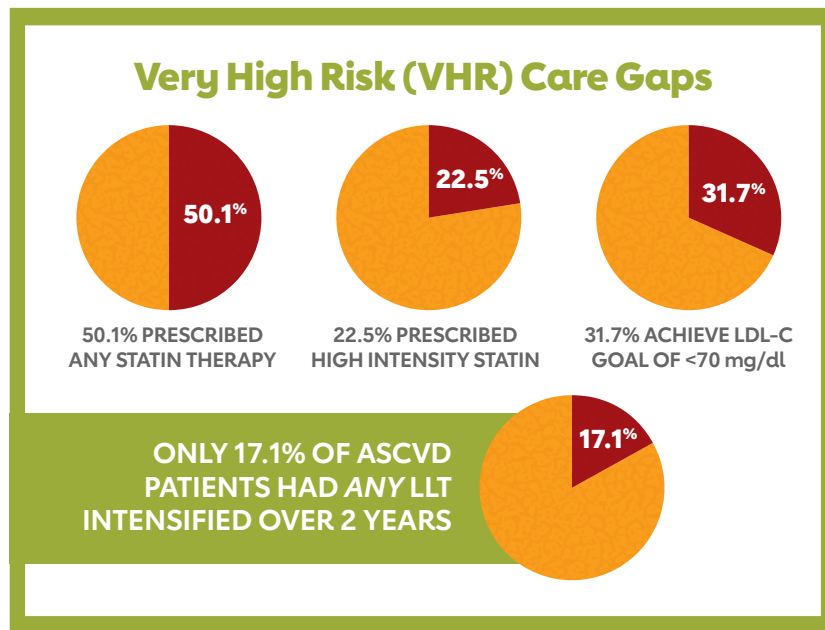
In this webinar recording, Seth Martin, MD, MHS, Professor of Medicine at Johns Hopkins School of Medicine discusses the role of a lipid clinic in ASCVD risk reduction, the importance of modern calculation of LDL cholesterol and the increasing role of digital health technology in lipid management.

Go!

Leveraging Modern Technology

A recent national cohort study of pharmacy and medical claims data across the country showed that only about 50% of patients who fall within the recommended guidelines for lipid lowering therapy (LLT) are receiving a statin at all⁶.

Additionally, there is substantial under-prescribing of evidence based LLT's, as only 22.5% of patients who meet the guidelines are prescribed a high intensity statin⁷. Despite these clear guideline recommendations, implementation of LLT has been poor across health care systems nationally.



The **PROMPT-LIPID** trial evaluated if an EHR alert can improve adherence to these guidelines and increase the proportion of patients who received intensification of LLT by identifying evidence-practice gaps for very high risk (VHR) ASCVD patients. This ongoing trial is determining the scalability for low-cost clinical decision support tools to improve LDL-C at a public health level.

**VIDEO**[Click to watch \(39 min.\)](#)

Alert! Can clinical decision support tools 'PROMPT' better quality ASCVD care?

Ralph J. Riello III, PharmD, BCPS, Clinical Pharmacy Specialist, Cardiorenal & Metabolism, Yale School of Medicine, walks us through the PROMPT-Lipid trials and the benefits of low-cost alerts for clinical decision support.

**PODCAST**[Click to listen \(17 min.\)](#)

Guideline-Based Alerts in the Electronic Health Record for ASCVD

For a brief highlight of the above-described work, listen to the podcast version featuring Dr. Riello.

⁶Nelson AJ, Haynes K, Shambhu S, et al. High-intensity statin use among patients with atherosclerosis in the U.S. *J Am Coll Cardiol.* 2022;79(18):1802-1813. <https://www.jacc.org/doi/abs/10.1016/j.jacc.2022.02.048>

⁷Cannon CP, De Lemos JA, Rosenson RS, et al. Use of lipid-lowering therapies over 2 years in GOULD, a registry of patients with atherosclerotic cardiovascular disease in the US. *JAMA Cardiol.* 2021;6(9):1060-1068

Ready, Set, Go!

Looking Ahead

Cardiovascular disease is the leading cause of death in the United States, and unmanaged hyperlipidemia can lead to stroke, coronary heart disease, sudden cardiac arrest, peripheral artery disease, and even death. This document maps out what you need to self-assess and evaluate your current lipid management plan, prepare and set a standard for your lipid management plan and implement the plan you set forth.

For more information, up-to-date education, and resources, visit heart.org/ASCVD.

Please address questions or inquiries to ascvdquestions@heart.org.

Key Takeaways:

- Evaluate current practices and identify areas for improvement through the provided self-assessment checklist and/or chart audits. Assess if LDL-C levels are documented appropriately and if patients are on high-intensity statins when indicated.
- Understand how ASCVD patients move through your systems to establish clear roles and responsibilities. Create a patient algorithm to find opportunities to streamline workflows.
- Acknowledge and address social determinants of health and health equity to reduce disparities and improve cardiovascular health for underserved ASCVD populations.
- Familiarize your care teams with the 2018 AHA/ACC Guideline on the Management of Blood Cholesterol to treat high-risk and very-high risk ASCVD patients with high-intensity statins.
- Utilize pharmacists to modify medications, order labs, assess adherence, educate patients, and communicate with the care team to improve lipid management.
- Implement a team-based approach involving providers, nurses, pharmacists, and care coordinators to better meet patient needs, especially for vulnerable populations.
- Continuously monitor your progress with regular (monthly, quarterly) performance metric evaluations by assessing adherence to guidelines therapies and appropriate lipid monitoring.

**Good
luck!
Here's
to your
great
success!**



Lipid Management Readiness Checklist

SELF-ASSESSMENT TOOL

Evaluate your current policies, care practices and patient pathways for guideline directed secondary-prevention ASCVD care. The checklist below will allow you to assess gaps in care and opportunities for improvement when building and implementing your standardized lipid management plan.

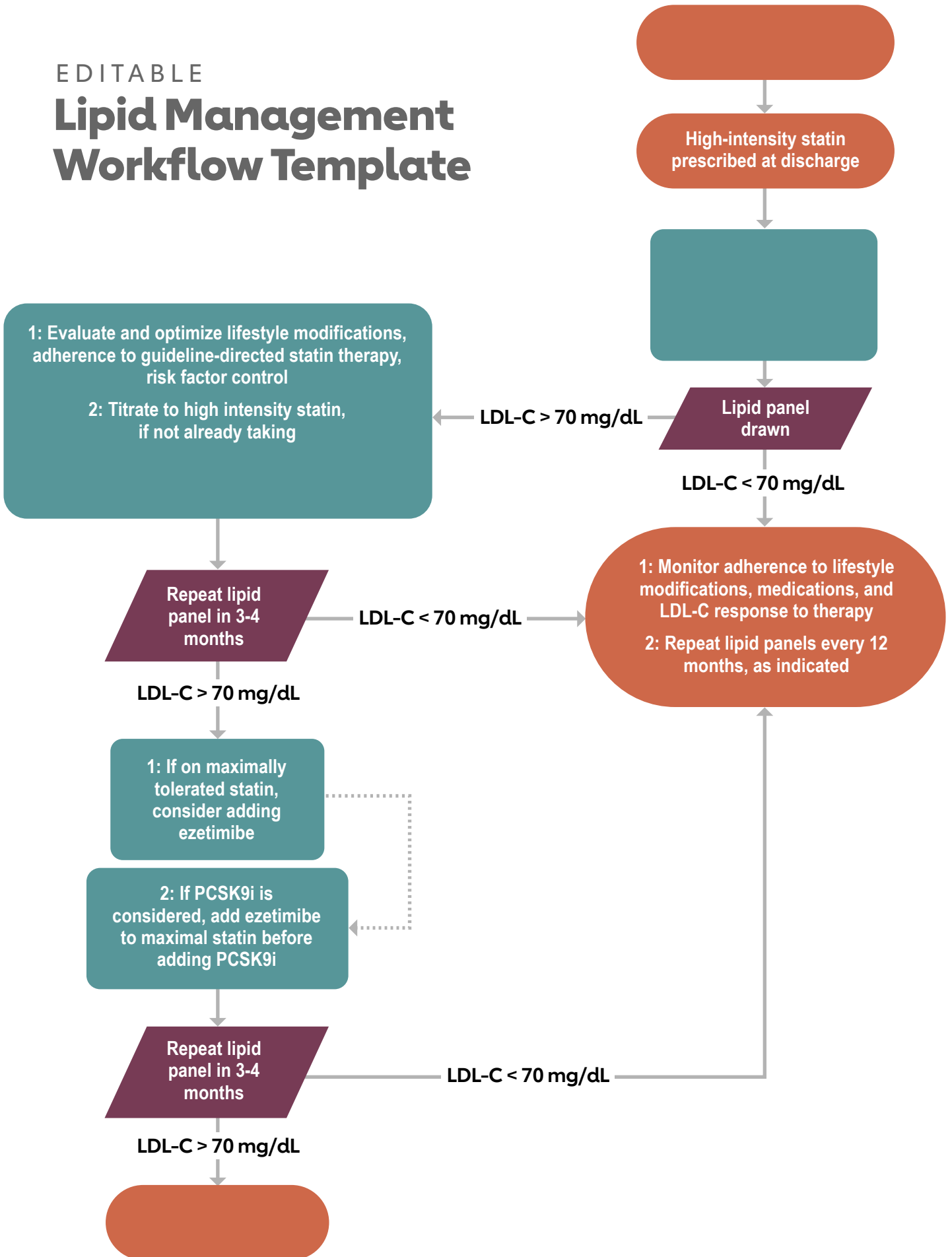
These questions are designed to generate conversations with your internal teams to create a model for how your system will approach managing ASCVD patients.

-
- | | |
|---|--|
| <input type="checkbox"/> Is there a clear referral and handoff process to get ASCVD patients seen by lipid management specialists after an acute event? | <input type="checkbox"/> What EMR reports do you have available to you to view LDL-C trends as a system, statin prescribing rates and post-acute ASCVD event follow up? |
| <input type="checkbox"/> Has staff been educated on current cholesterol guidelines ⁸ for secondary prevention of ASCVD? | <input type="checkbox"/> Is there an effective process for identifying patients who would benefit from more intensive lipid therapy? |
| <input type="checkbox"/> Does the lipid management plan development consider lifestyle modification, medication initiation and intensification and patient education? | <input type="checkbox"/> Are patient's baseline LDL-C levels measured and monitored regularly? What is your cadence for repeated testing for patients not at and at goal? |
| <input type="checkbox"/> Can shared management of ASCVD patients be improved, especially with primary care doctors and specialists? | <input type="checkbox"/> Is the role of statins and other lipid-lowering therapies in reducing ASCVD events understood by all prescribers? |
| <input type="checkbox"/> Are barriers to medication adherence and lifestyle changes assessed? | <input type="checkbox"/> What role could community resources play in managing ASCVD patients? |
| <input type="checkbox"/> What decision support tools and patient aids are used for shared decision making? | <input type="checkbox"/> Do you have a uniform goal of LDL-C < 70 mg/dL for secondary-prevention ASCVD patients in all clinics? |
-

⁸See Table 4.1

EDITABLE

Lipid Management Workflow Template



1: Evaluate and optimize lifestyle modifications, adherence to guideline-directed statin therapy, risk factor control
2: Titrate to high intensity statin, if not already taking

Repeat lipid panel in 3-4 months

LDL-C > 70 mg/dL

1: If on maximally tolerated statin, consider adding ezetimibe

2: If PCSK9i is considered, add ezetimibe to maximal statin before adding PCSK9i

Repeat lipid panel in 3-4 months

LDL-C > 70 mg/dL

1: Monitor adherence to lifestyle modifications, medications, and LDL-C response to therapy
2: Repeat lipid panels every 12 months, as indicated

High-intensity statin prescribed at discharge

Lipid panel drawn

LDL-C < 70 mg/dL

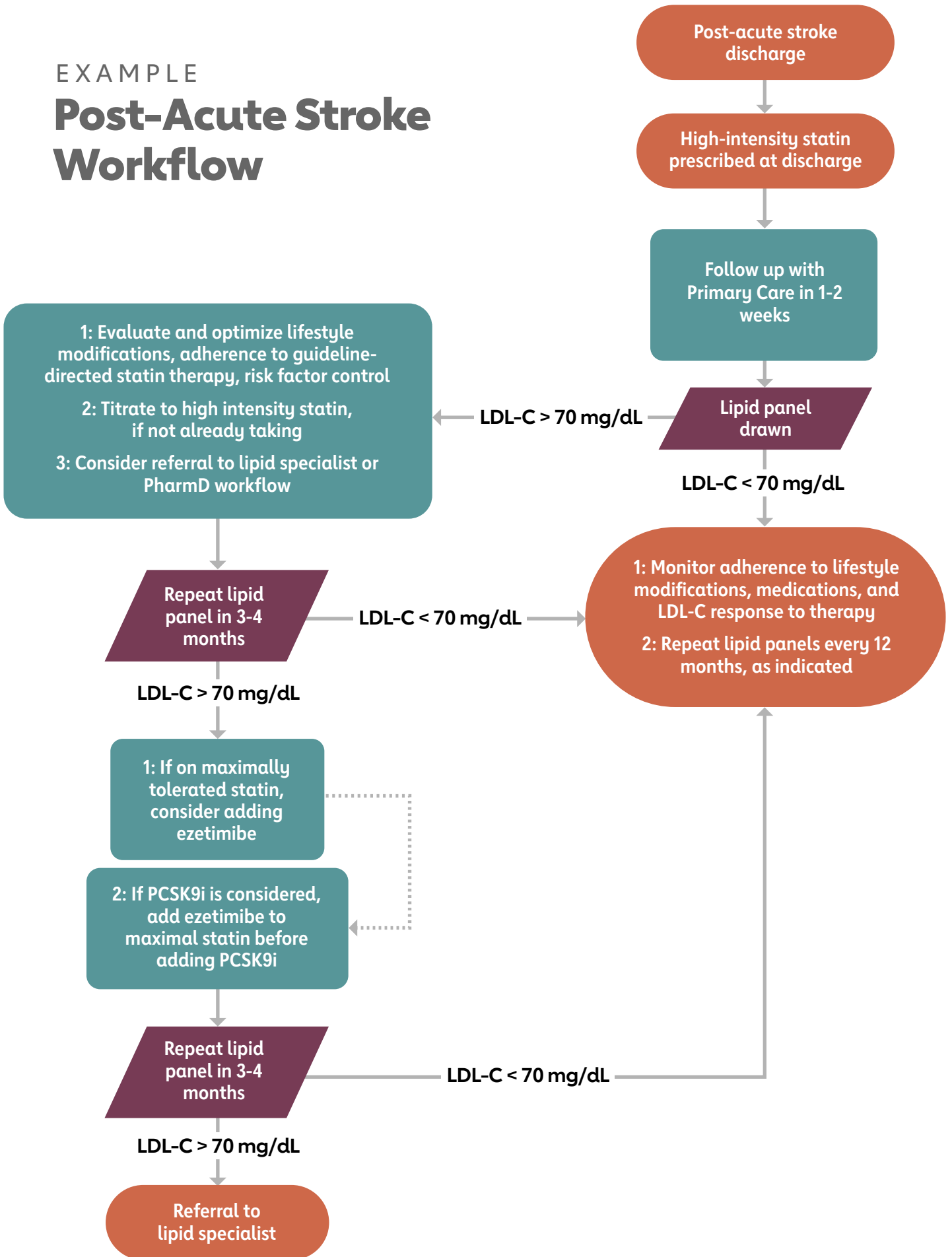
LDL-C > 70 mg/dL

LDL-C < 70 mg/dL

LDL-C < 70 mg/dL

EXAMPLE

Post-Acute Stroke Workflow



EXAMPLE

Post-Acute CAD Workflow

