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From Risk to Results: Cases in ASCVD Prevention and Treatment

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- **Ty J. Gluckman, MD, MHA:** *consultant*: OptumRx
- **Rishi Wadhera, MD, MPP, MPhil:** *consultant:* Abbott Vascular, Chambercardio

Educational Need/Practice Gap

- **Gap:** Patients are not achieving LDL-C targets, which increases their risk for ASCVD events:
  - **Need**: Rural physicians and other HCPs need education on the latest evidence-based LDL-C targets and how to strategically implement therapeutic regimens to achieve treatment goals in rural patient populations
- **Gap:** Providers are not assessing Lp(a) levels, leaving patients with elevated Lp(a) at increased risk for ASCVD events
  - **Need:** Rural providers and other HCPs need education on the role of elevated Lp(a) as a risk factor for ASCVD and how current and emerging strategies to target elevated Lp(a) can be utilized in rural settings
- **Gap:** Disparities in care remain for patients in rural healthcare settings
  - **Need:** Rural providers and other HCPs need strategies on how to collaborate with both patients and academic centers to implement tactics that allow patients living in rural and/or underserved areas improved access to healthcare

Learning Objectives

- Develop strategies to implement a personalized treatment plan for patients to reduce ASCVD risk
- Formulate collaboration strategies between academic and rural health providers to optimize ASCVD management

Expected Outcome

- After the education, learners will know how to:
  - Implement guideline updates that support lowering LDL-C targets and incorporate strategies to initiate/intensify treatment regimens in rural populations
  - Assess the application of evaluating Lp(a) in appropriate patients and implement recommended treatment strategies to reduce ASCVD risk
  - Collaborate between rural and academic settings to increase access for patients living in rural and/or underserved areas

Did you watch online activity titled, "Establishing Best Practices for Collaborative Care for Patients with ASCVD Between Academic and Rural Providers" prior to this conference?

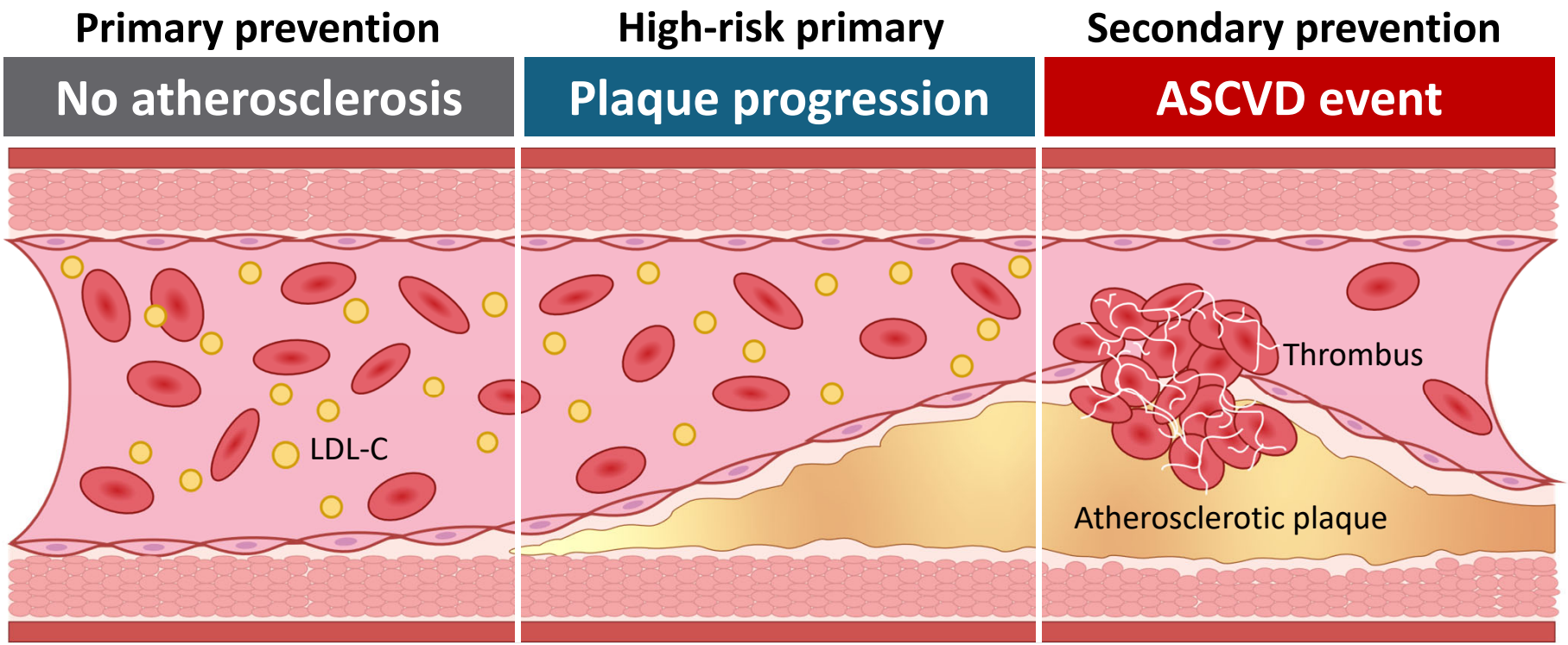
Yes

0%

No

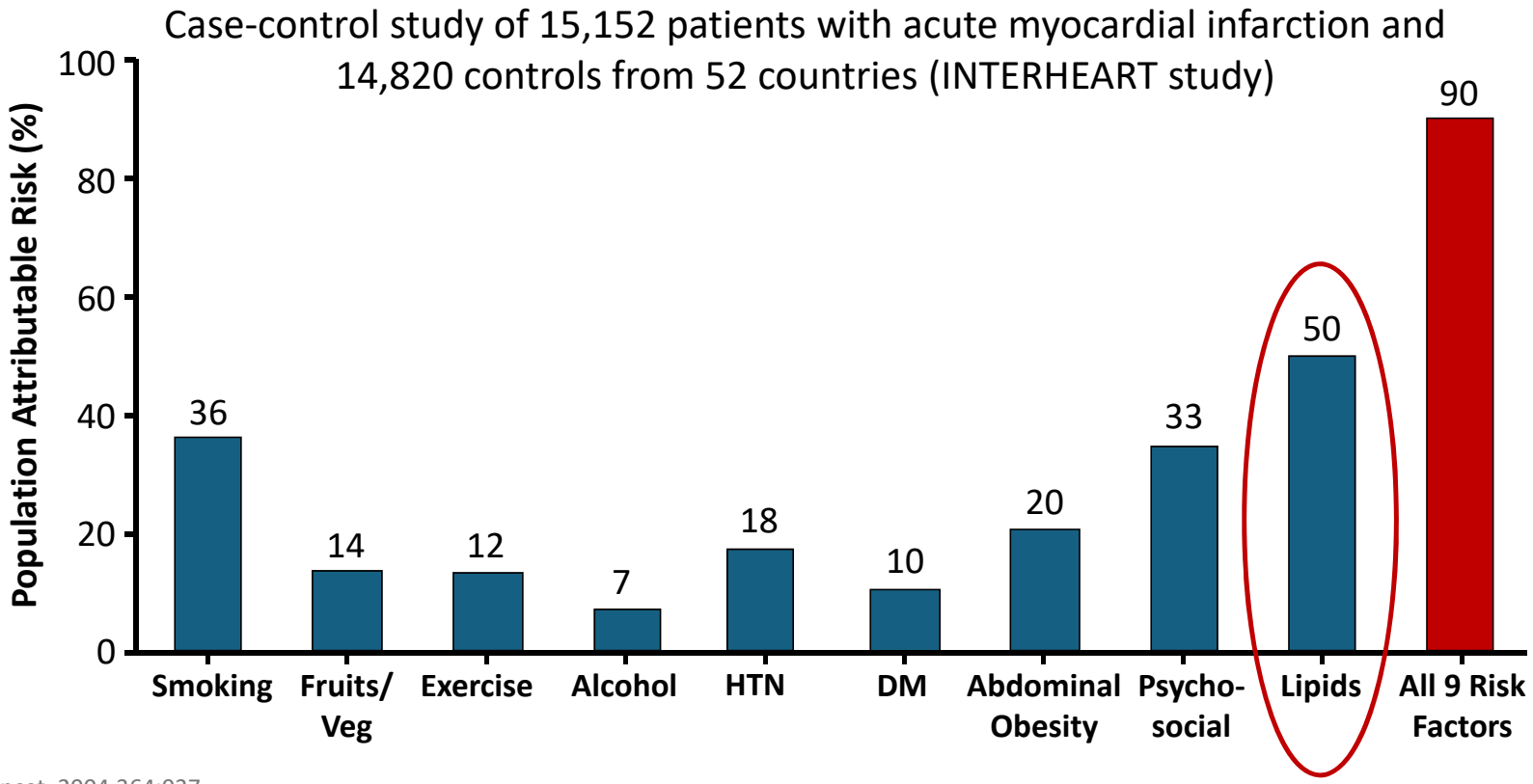
0%

Continuum of Atherosclerotic Cardiovascular Disease Risk



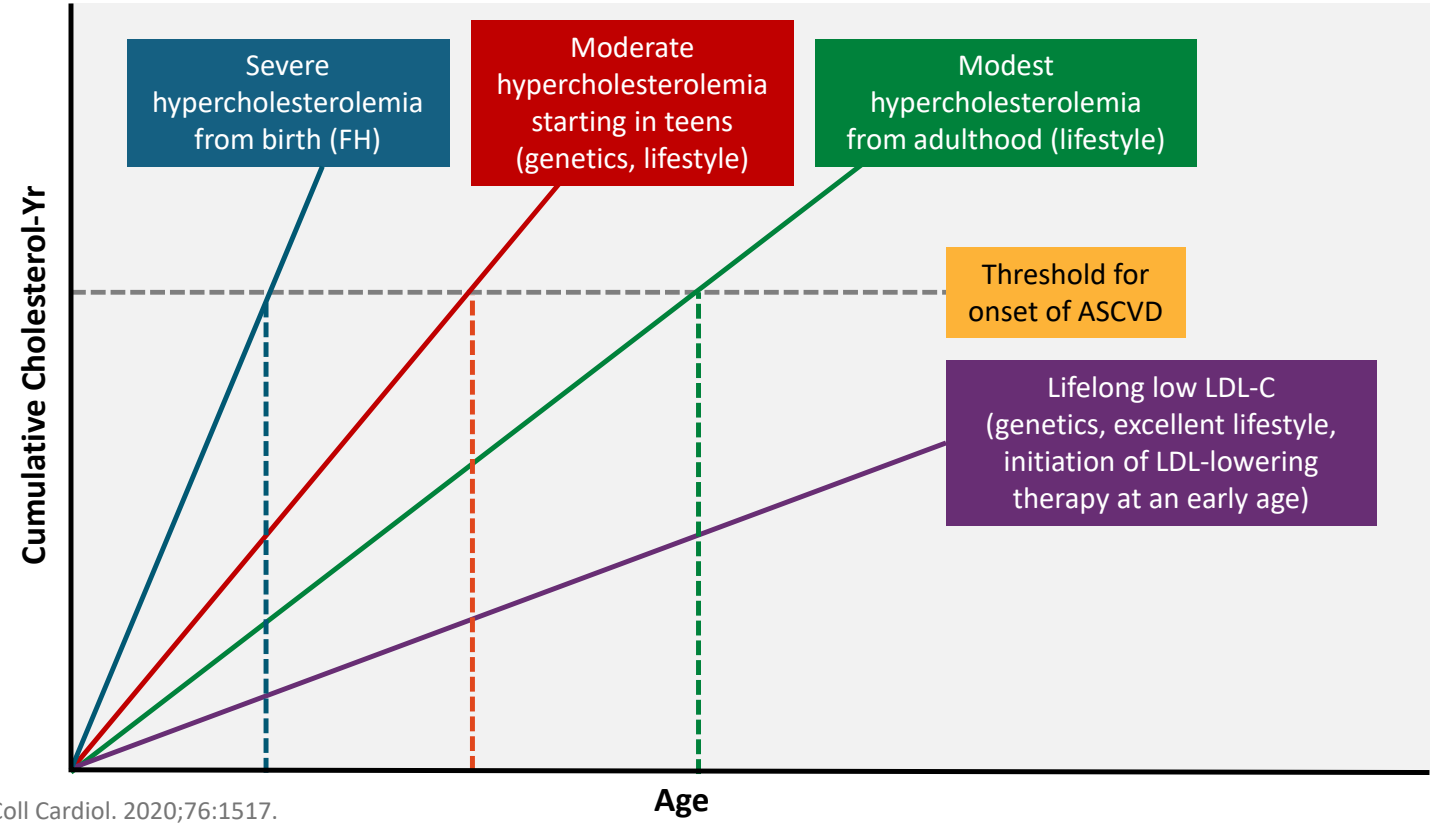
Wilsonson. J Am Heart Assoc. 2023;12:e028892.

Relative Impact of LDL-Cholesterol



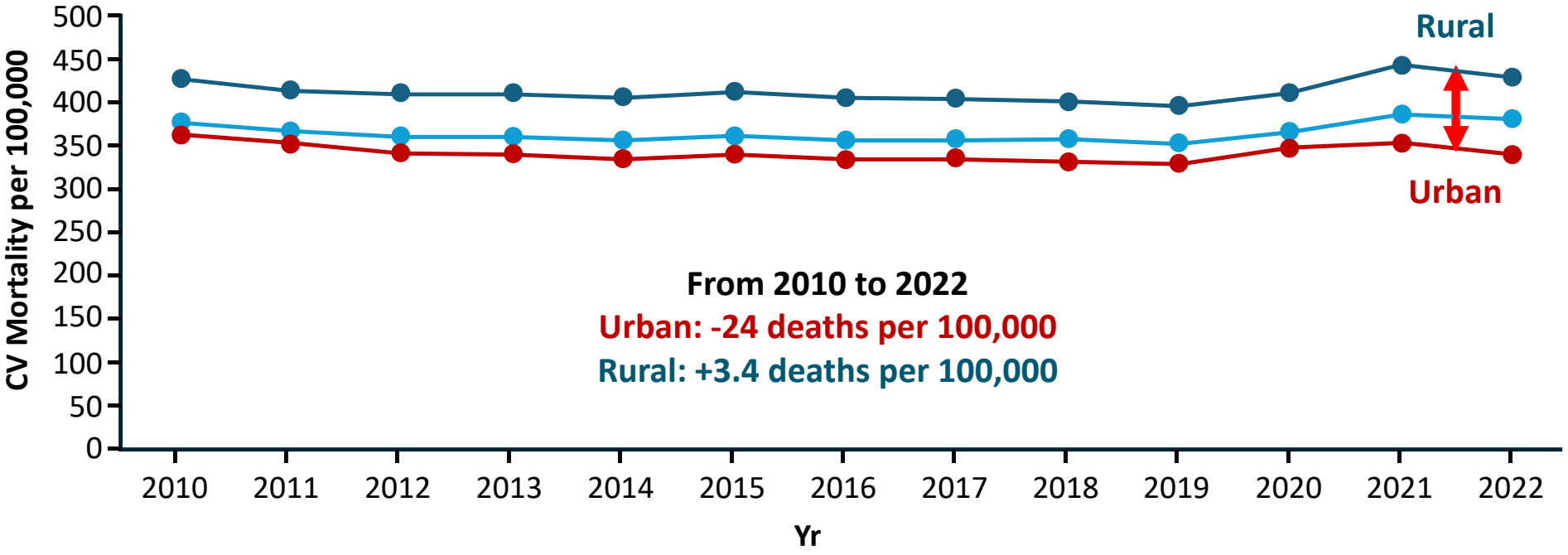
Yusuf. Lancet. 2004;364:937.

It Comes Down to Cholesterol-Years of Exposure



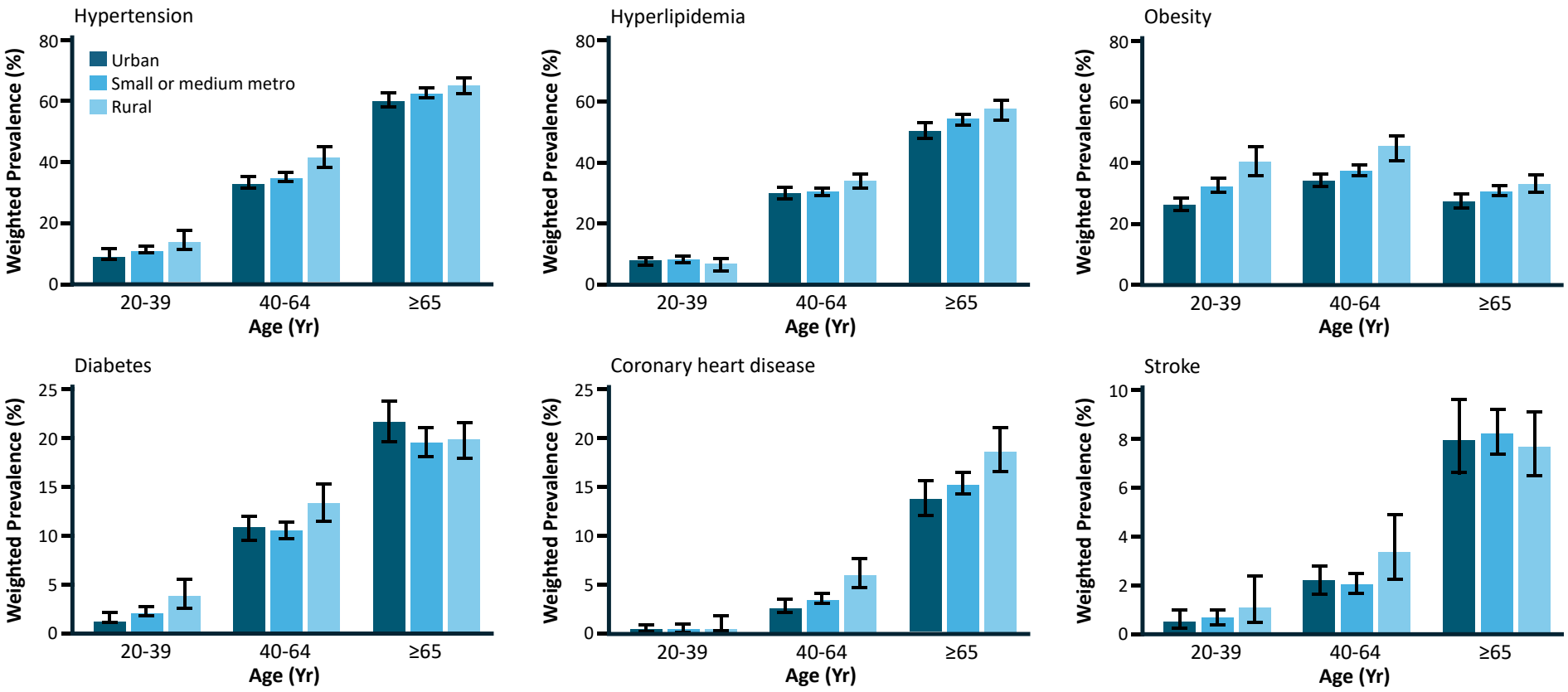
Shapiro. J Am Coll Cardiol. 2020;76:1517.

Rural–Urban Inequities in Cardiovascular Mortality Are Widening



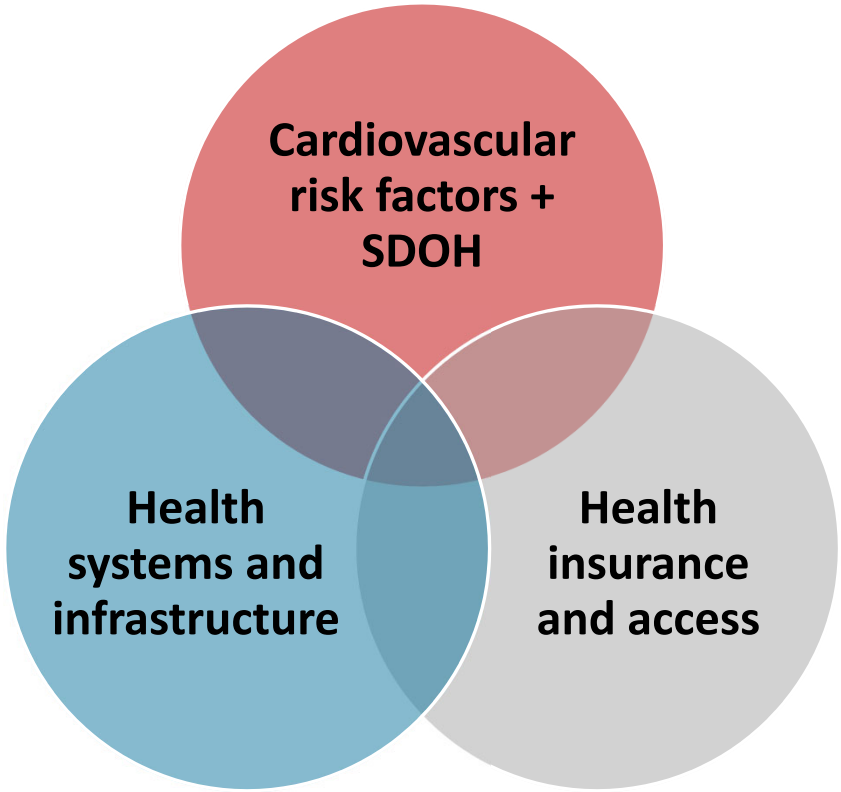
Marinacci. JACC. 2025;85:93.

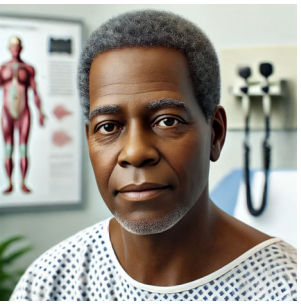
Cardiometabolic Risk Factors and Diseases by Age



Liu. JAMA Cardiol. 2025;[Epub].

What Is Contributing to the Gap Between Rural and Urban Communities?





Patient Case: A 68-Yr-Old Black Man With ASCVD

- **Past Medical History:** Obesity (BMI: 32.6 kg/m^2), HTN, hypercholesterolemia, T2D, obstructive sleep apnea on CPAP, and symptomatic PAD that has been medically managed to date
- **Current Medications:** Aspirin 81 mg/day, hydrochlorothiazide 50 mg/day, lisinopril 20 mg/day, metformin 1000 mg BID, potassium chloride 20 mEq/day, simvastatin 20 mg each evening
- **Lifestyle Factors:** Previously sedentary, fairly adherent to a heart-healthy diet, and recently started an exercise program at the local community center
- **Social History:** Lives in rural Kentucky, 85 miles from the nearest cardiologist. He has limited access to specialty care, relies on a small local pharmacy with limited medication availability, and has inconsistent access to transportation for follow-up

Labs	Value
LDL-C	124 mg/dL
HDL-C	33 mg/dL
Triglycerides	288 mg/dL
A1C	7.8%
eGFR	63 mL/min/1.73 m^2

What risk category does this patient fall into and what is the LDL-C treatment goal?

Very high risk ASCVD; 50% reduction in LDL-C and a level <55 mg/dL

0%

Very high risk ASCVD; 50% reduction in LDL-C and a level <70 mg/dL

0%

Not very high risk ASCVD; 50% reduction in LDL-C and a level <55 mg/dL

0%

Not very high risk ASCVD; 50% reduction in LDL-C and a level <70 mg/dL

0%

Who Warrants LDL-C–Lowering Therapy?

Clinical benefits of LDL-C–lowering applies to 4 patient groups

4 Key Groups Warranting LDL-C–Lowering Therapy

Clinical ASCVD	Primary severe hypercholesterolemia	Diabetes mellitus	Primary prevention: No ASCVD, SH, or DM
• Very high ASCVD risk • Not very high ASCVD risk	(LDL-C ≥190 mg/dL)		

Dual goals for all 4 patient groups: (1) percentage reduction in LDL-C and (2) reduction in LDL-C below a specific threshold

In general, the intensity of LDL-C–lowering therapy should match the baseline risk of the individual

Grundy. J Am Coll Cardiol. 2019;73:e285. Lloyd-Jones. J Am Coll Cardiol. 2022;80;1366.

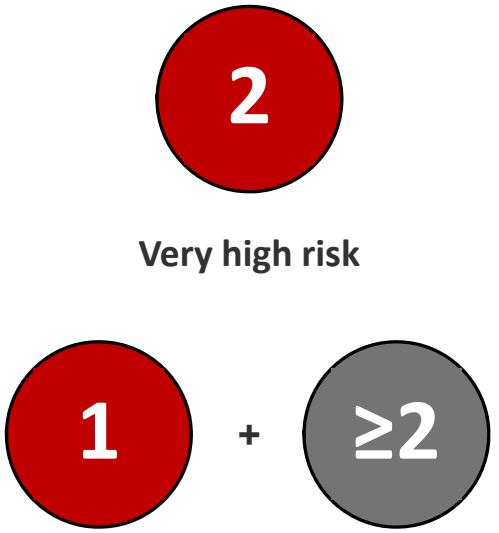
Risk Assessment Among Patients With ASCVD

Major ASCVD Events

- ACS within past 12 mo
- History of MI (other than ACS above)
- History of ischemic stroke
- Symptomatic PAD

High-Risk Conditions

- Age ≥65 yr
- CKD (GFR 15-59 mL/min/1.73 m^2)
- Coronary bypass or percutaneous intervention
- Current smoker
- Diabetes
- HeFH
- History of HF
- Hypertension
- LDL-C ≥100 mg/dL despite maximally tolerated statin + ezetimibe



Very high risk includes a history of multiple major ASCVD events or 1 major ASCVD event and multiple high-risk conditions.

Adapted from Grundy. J Am Coll Cardiol. 2019;73:e285.

All 4 Patient Groups Have Dual LDL-C Goals

Population	Reduction in LDL-C	LDL-C Level (mg/dL)
Patients with ASCVD at very high risk	≥50%	<55
Patients with ASCVD not at very high risk	≥50%	<70
Patients with severe hypercholesterolemia (LDL-C ≥190 mg/dL)	≥50%	<100
Patients with DM with 10-yr ASCVD risk <20%	30%-49%	<100
Patients with DM with 10-yr ASCVD risk ≥20%	≥50%	<70
Patients without ASCVD, SH, or DM with 10-yr ASCVD risk 5.0%-19.9%	30%-49%	<100
Patients without ASCVD, SH, or DM with 10-yr ASCVD risk ≥20%	≥50%	<70
Patients without ASCVD, SH, or DM with CAC 1-99 AU and <75th percentile	30%-49%	<100
Patients without ASCVD, SH, or DM with CAC ≥100 AU or ≥75th percentile	≥50%	<70

Grundy. J Am Coll Cardiol. 2019;73:e285. Lloyd-Jones. J Am Coll Cardiol. 2022;80;1366.

What change should be made to his current lipid lowering regimen with an LDL-C of 124 mg/dL while taking simvastatin 20 mg at night?

Add evolocumab 140 mg every 2 weeks 0%

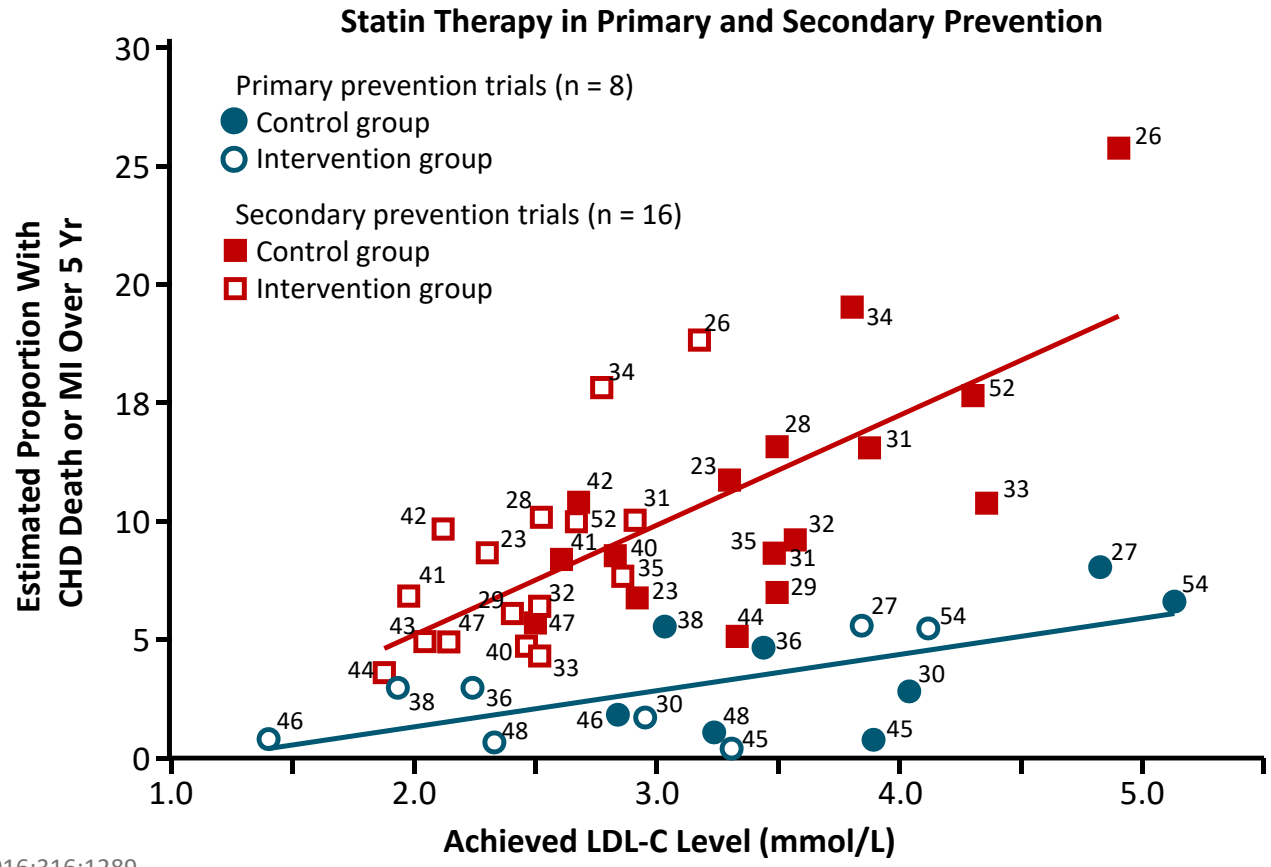
Add ezetimibe 10 mg/day 0%

Increase his simvastatin to 40 mg each evening 0%

Replace his simvastatin with atorvastatin 20 mg/day 0%

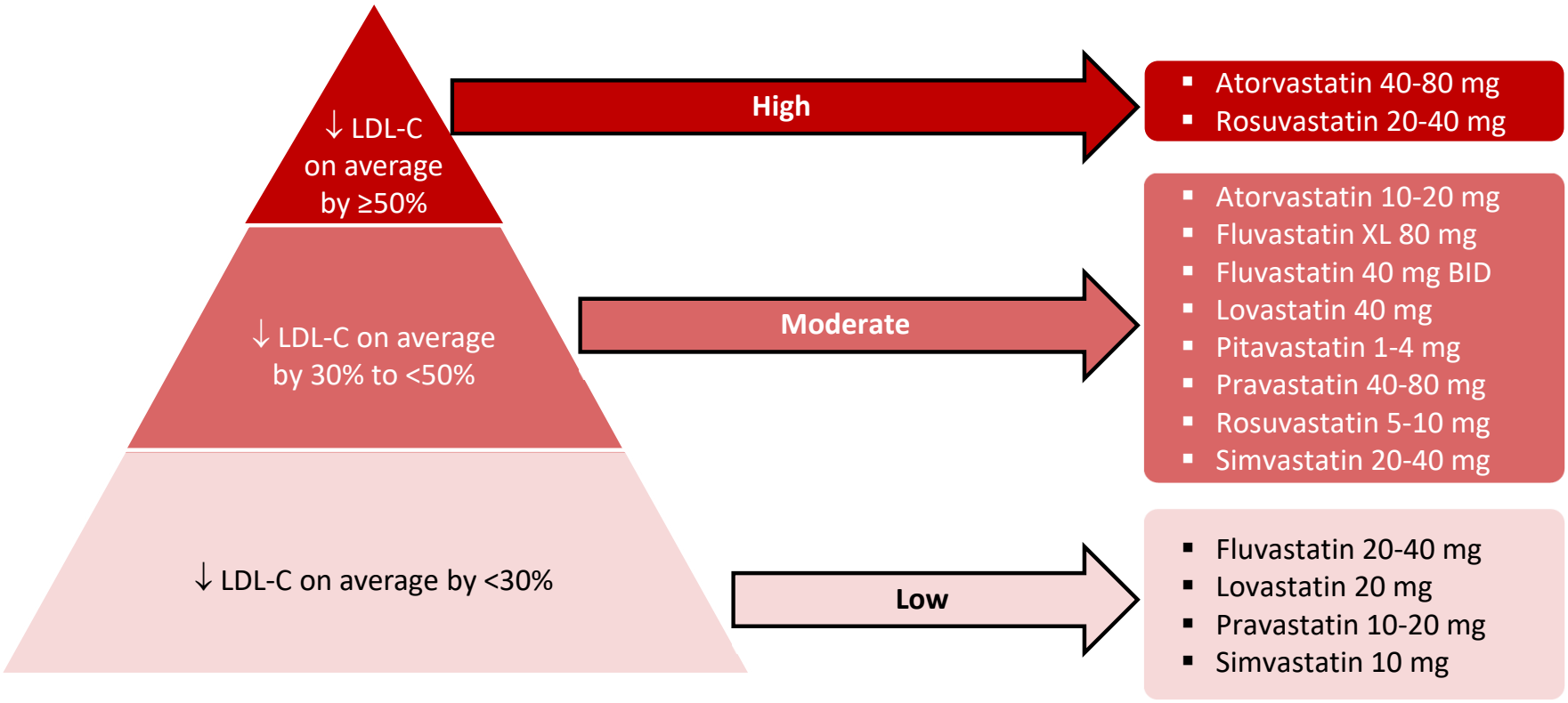
Replace his simvastatin with atorvastatin 80 mg/day 0%

Statins Remain Mainstay Therapy for Key Risk Groups



Silverman. JAMA. 2016;316:1289.

Intensities of Statin Therapy



Adapted from Grundy. J Am Coll Cardiol. 2018;73:e285.

Your patient has not achieved his target LDL-C level and requires additional lipid-lowering medication. He expresses concerns about presenting for in-office visits to his cardiologist given the distance he needs to travel, but he also has difficulty scheduling a visit with his PCP. Nevertheless, he wants counseling on the risks and benefits of a new medication.

What alternatives may be offered to reduce barriers in accessing care?

Strongly encourage him to present for an in-office visit

0%

Offer a telehealth visit to discuss medication options

0%

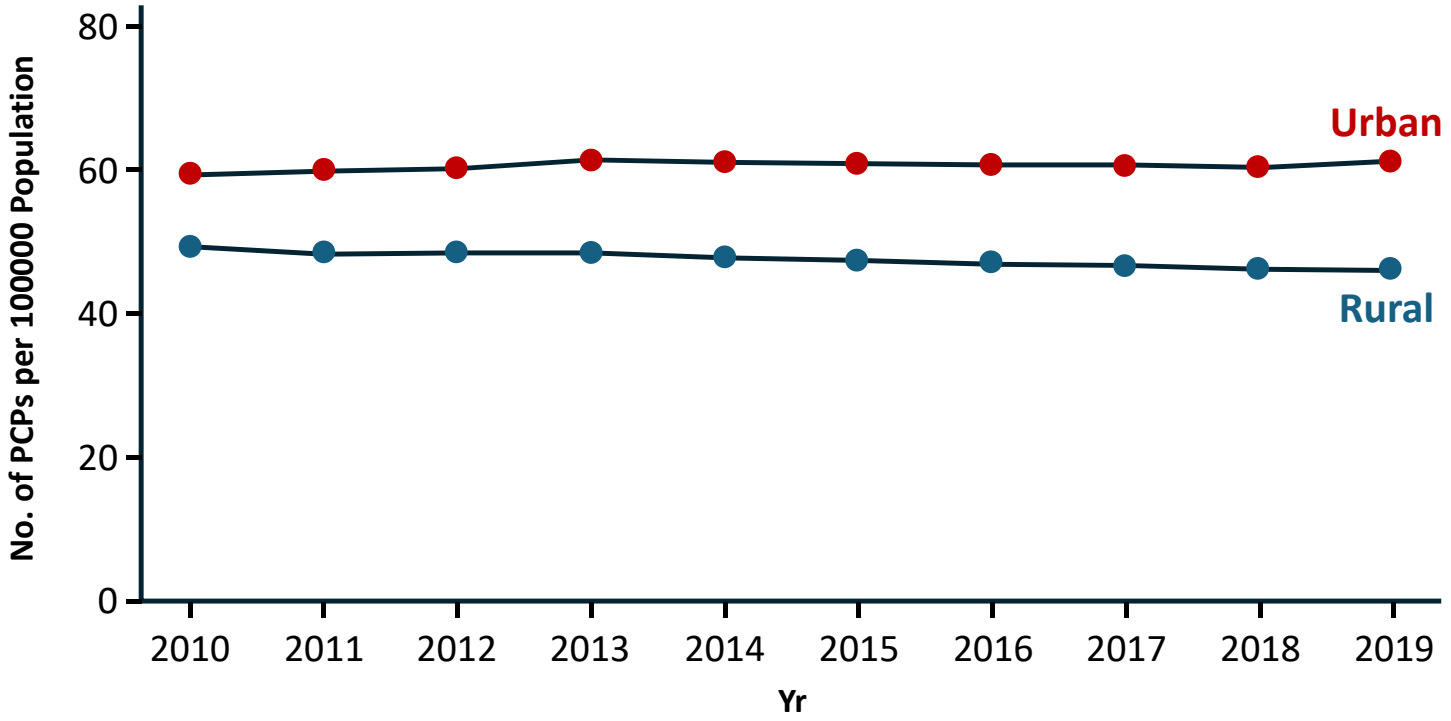
Offer to call a prescription into his pharmacy without a visit and have the pharmacist counsel him on the new medication

0%

All of the above

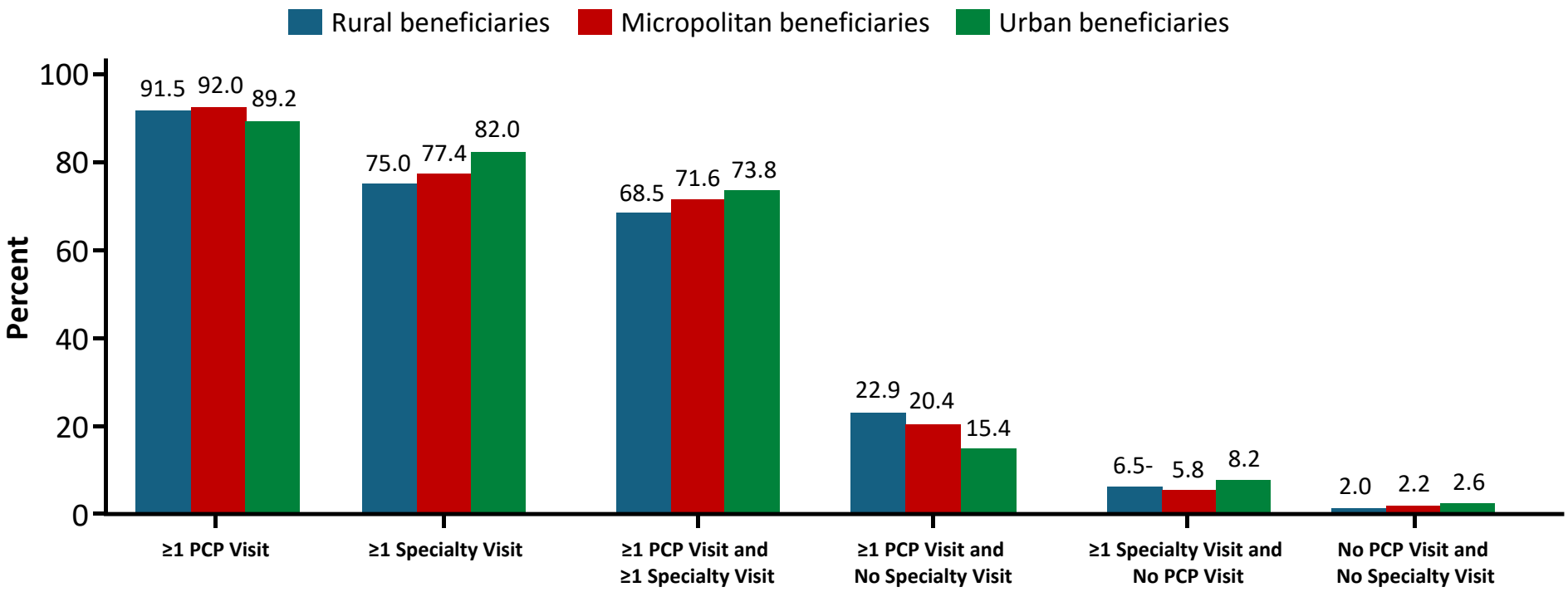
0%

Primary Care Provider Supply Declining in Rural Areas



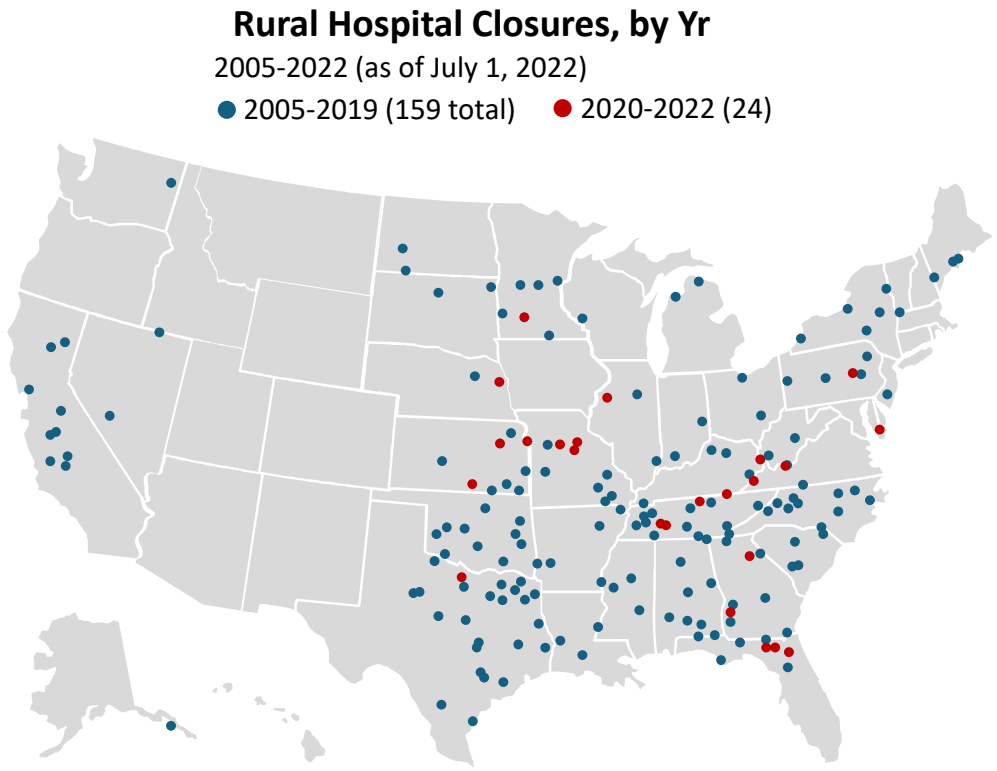
Liu. JAMA. 2022;328:1974.

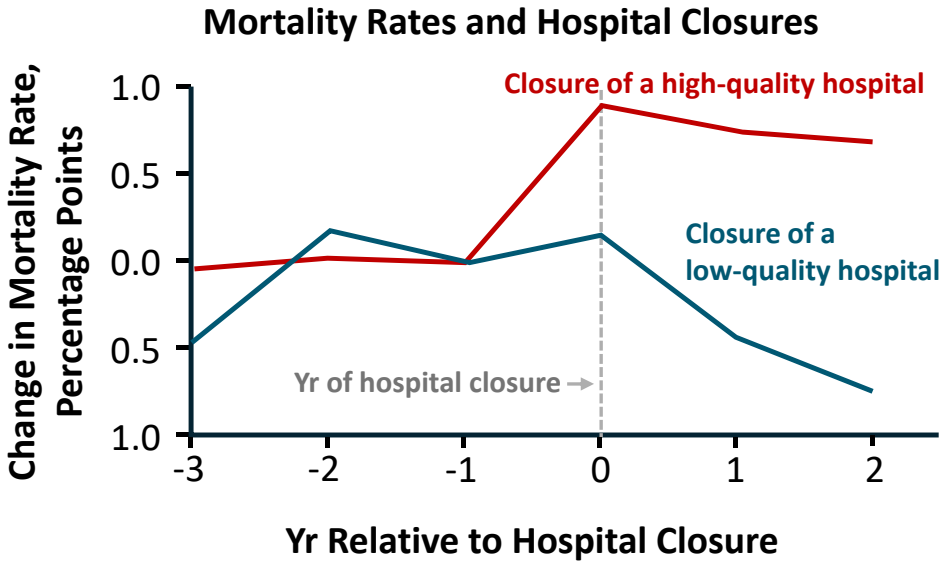
Lower Access to Specialty Care in Rural Areas



Johnston. Health Affairs. 2019;38:1993.

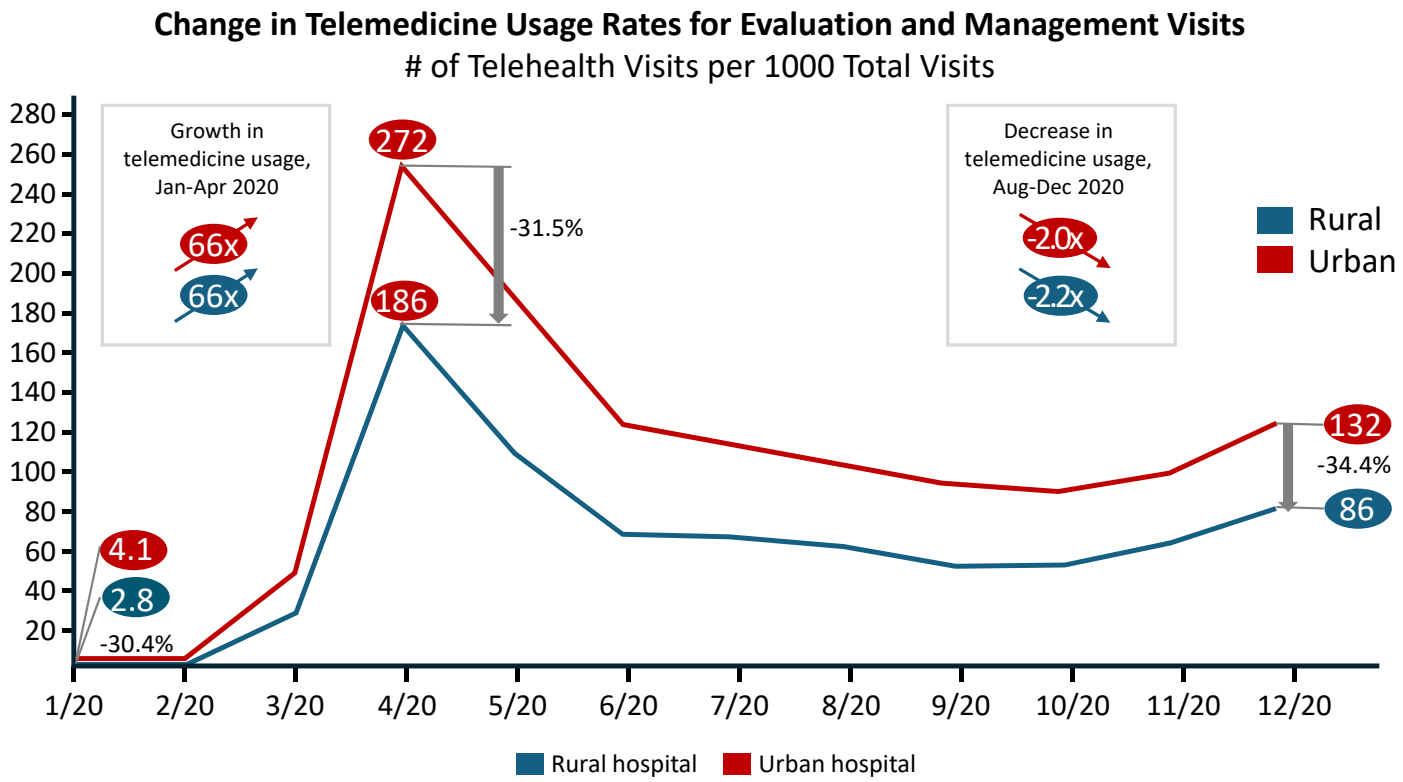
Ongoing Rural Hospital Closure Crisis





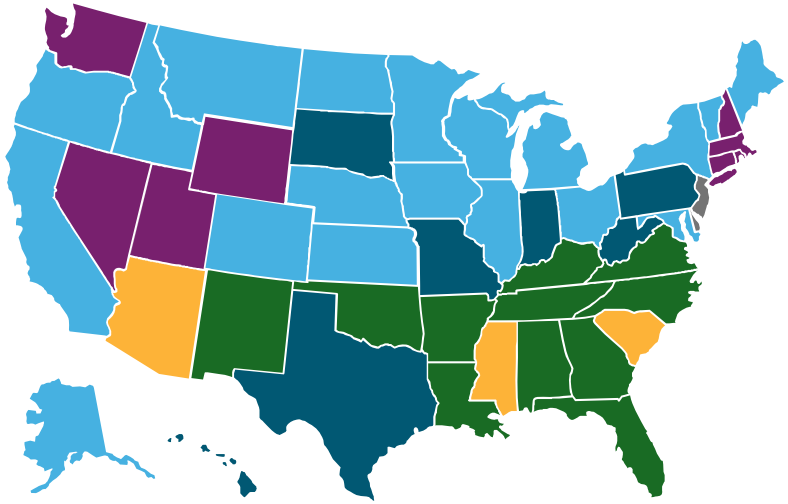
shepscenter.unc.edu/programs-projects/rural-health/rural-hospital-closures/.
nber.org/bh/20241/how-informative-are-risk-adjusted-hospital-quality-measures.

Can Telehealth Bridge the Rural–Urban Gap in Access?



The Digital Divide in Rural America

Rural Households With Broadband Subscriptions



% Rural Households With Broadband Subscriptions

60.0-64.9 | 65.0-69.9 | 70.0-74.9

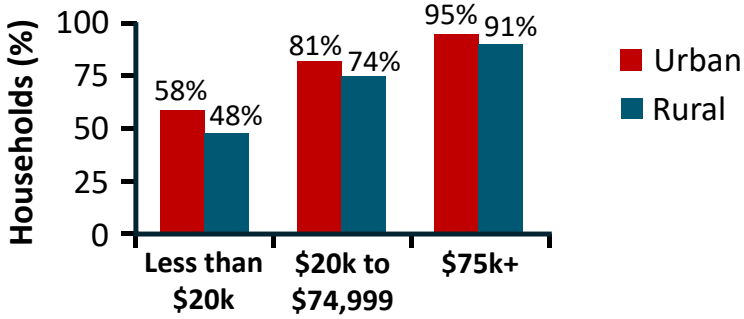
75.0-79.9 | 80.0-86.9 | No information

Households With Broadband Subscriptions	83% Urban	vs	73% Rural

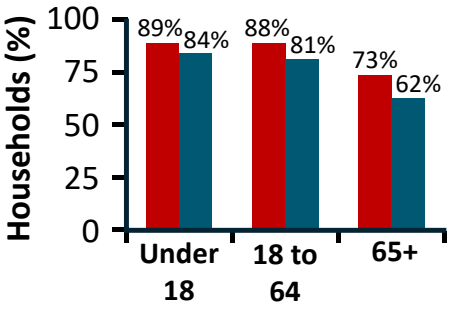
ruralhome.org/rvfall2018/.

Broadband Subscriptions

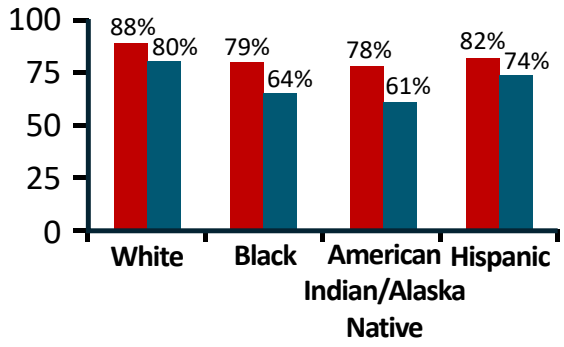
By Income

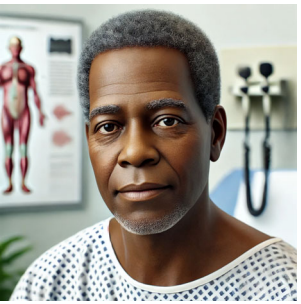


By Age



By Race/Ethnicity





Back to our Patient:

Consider an *Alternative Scenario:*

- He **does not** have PAD
- He **does not** have T2D
- His LDL-C is 124 mg/dL
- He is **not** currently taking a statin
- His CAC score is 161 AU
  - This puts him in the 76th percentile for age, sex, race, and ethnicity

What would be the preferred treatment approach to achieve his LDL-C goal?

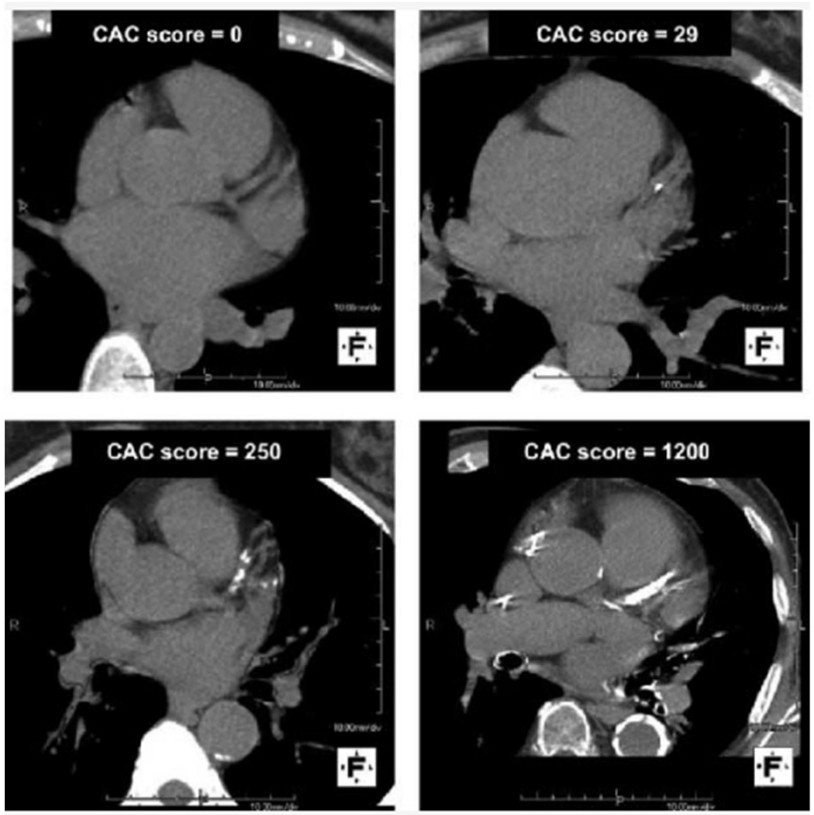
Defer statin therapy and remeasure a CAC in 3-5 yr — 0%

Initiate moderate-intensity statin therapy — 0%

Initiate high-intensity statin therapy — 0%

Initiate high-intensity statin therapy and ezetimibe 10 mg/day — 0%

Risk Assessment Among Patients Without ASCVD, SH, or DM



- CAC is a marker of subclinical atherosclerosis, total plaque burden, and ASCVD risk
- Increased risk of ASCVD with CAC burden, independent of coronary artery stenosis
- Imaging of CAC is noninvasive and low cost; it may identify patients at high risk before a clinical event
- A CAC score of 0 is associated with low ASCVD risk; consideration can be given to deferral of statin therapy and remeasurement of a CAC score in 3-5 yr absent DM, an LDL-C ≥190 mg/dL, family history of premature CHD, tobacco use, or another high-risk condition
- Primary prevention patients with a CAC score ≥1000 represent a particularly high-risk group appropriate for combination lipid-lowering therapy

Adapted from Grundy. J Am Coll Cardiol. 2019;73:e285. Lloyd-Jones. J Am Coll Cardiol. 2022;80;1366.

All 4 Patient Groups Have Dual LDL-C Goals

Population	Reduction in LDL-C	LDL-C Level (mg/dL)
Patients with ASCVD at very high risk	≥50%	<55
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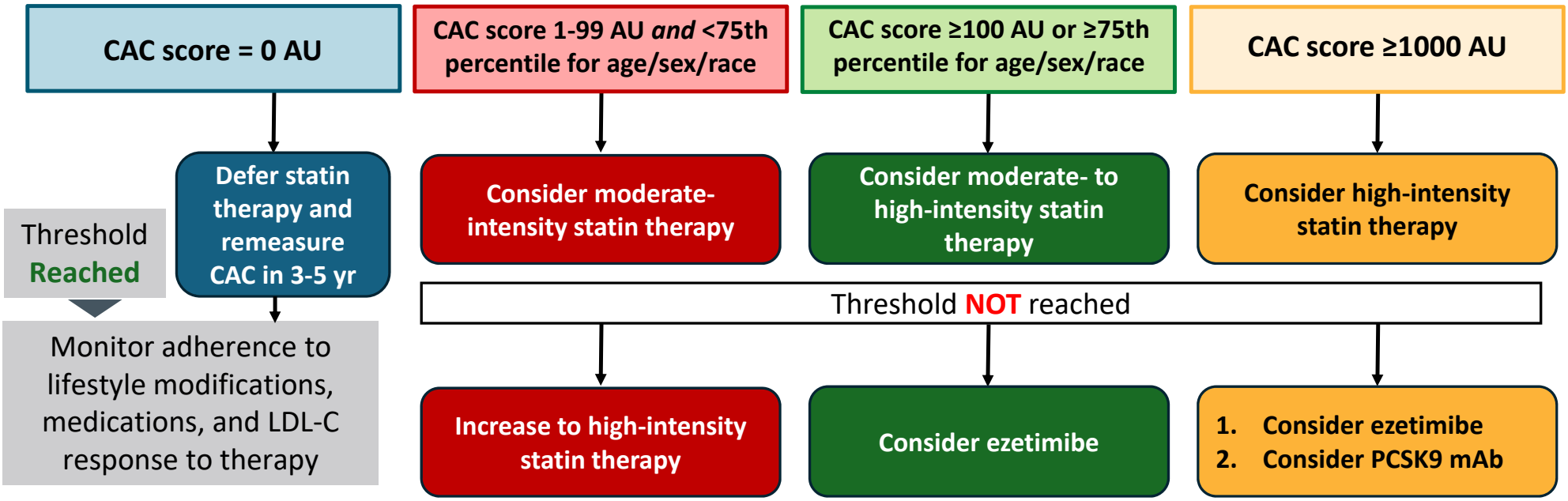
Patients without ASCVD, SH, or DM with CAC ≥100 AU or ≥75th percentile	≥50%	<70

Grundy. J Am Coll Cardiol. 2019;73:e285. Lloyd-Jones. J Am Coll Cardiol. 2022;80;1366.

2022 ACC Expert Decision Pathway

Incorporation of CAC Score in Risk Assessment and Treatment for Adults Without ASCVD, T2D, or LDL-C ≥ 190 mg/dL

Consider CAC score in patents with borderline (5.0% to <7.5%) and intermediate (≥7.5% to <20.0%) risk



Lloyd-Jones. J Am Coll Cardiol. 2022;80;1366.

You recommend a high-intensity statin, but the patient is concerned about potential risks, including dementia and cancer. Which of the following statements is true regarding these risks?

High-intensity statin therapy is associated with a small increased risk of cancer, but no increased risk of cognitive dysfunction

0%

High-intensity statin therapy is associated with a small increased risk of cancer and cognitive dysfunction

0%

High-intensity statin therapy is associated with no increased risk of cancer, but a small increased risk of cognitive dysfunction

0%

High-intensity statin therapy is associated with no increased risk of cancer or cognitive dysfunction

0%

Highly Favorable Benefit/Risk Ratio for Statin Therapy

Benefits

- **Reduction in LDL-C levels**
- **Regression of coronary atheroma**
- **Reduction in ASCVD events**
- No evidence to support adverse effects of statins on cognitive function, clinically significant renal deterioration, or risk for cataract, or hemorrhagic stroke in patients without prior stroke

Risks

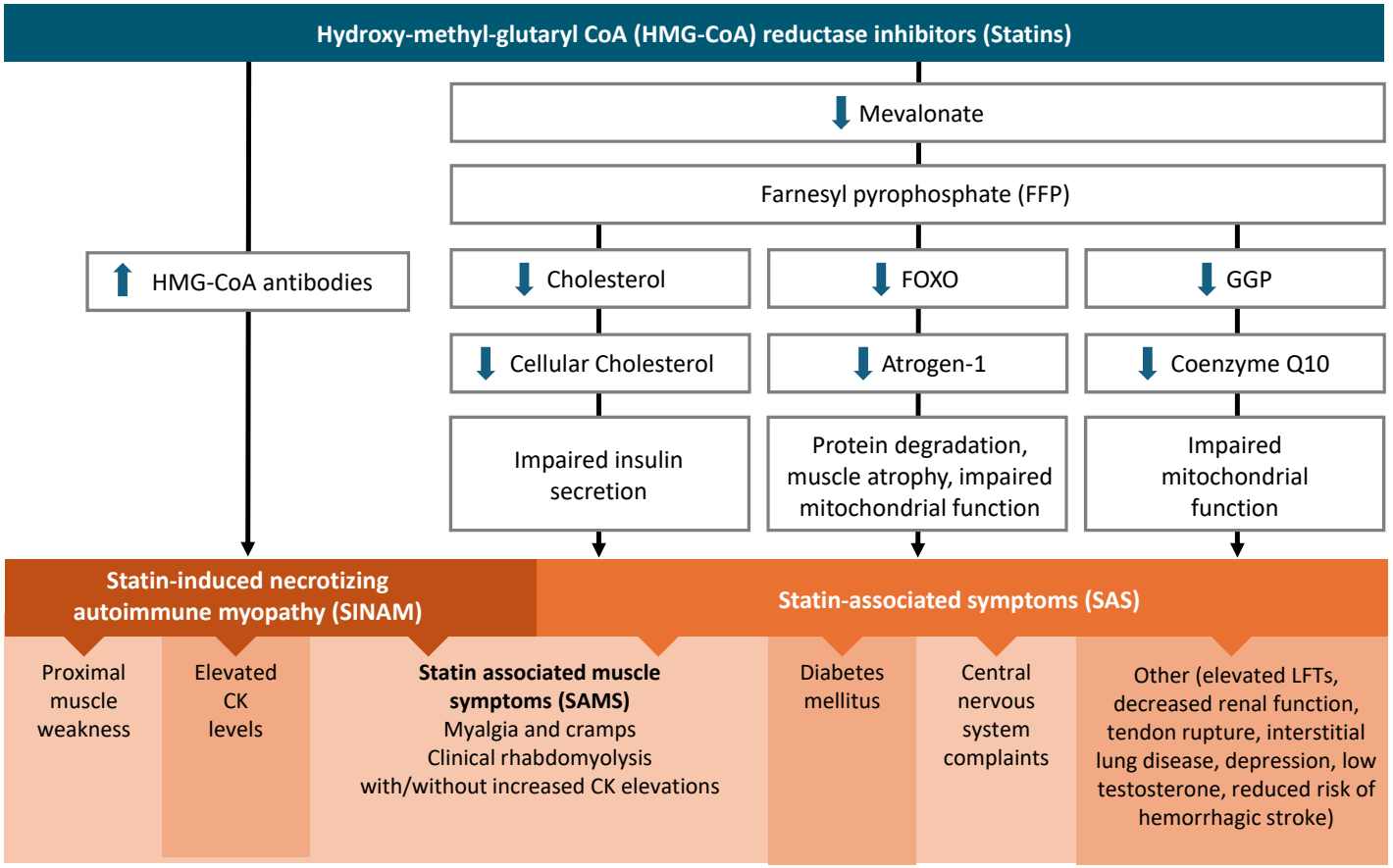
- Modest risk of new-onset diabetes (~0.1% annually), higher in those with the metabolic syndrome cluster
- Muscle symptoms, but be aware of the nocebo effect
- Very rarely, clinically relevant liver injury
- Possible increase in risk of hemorrhagic stroke in patients with a prior stroke suggested by SPARCL; not confirmed in the substantive evidence base of RCTs, cohort and case-control studies

Mach. Eur Heart J. 2018;39:2526.

Types of Statin-Associated Side Effects

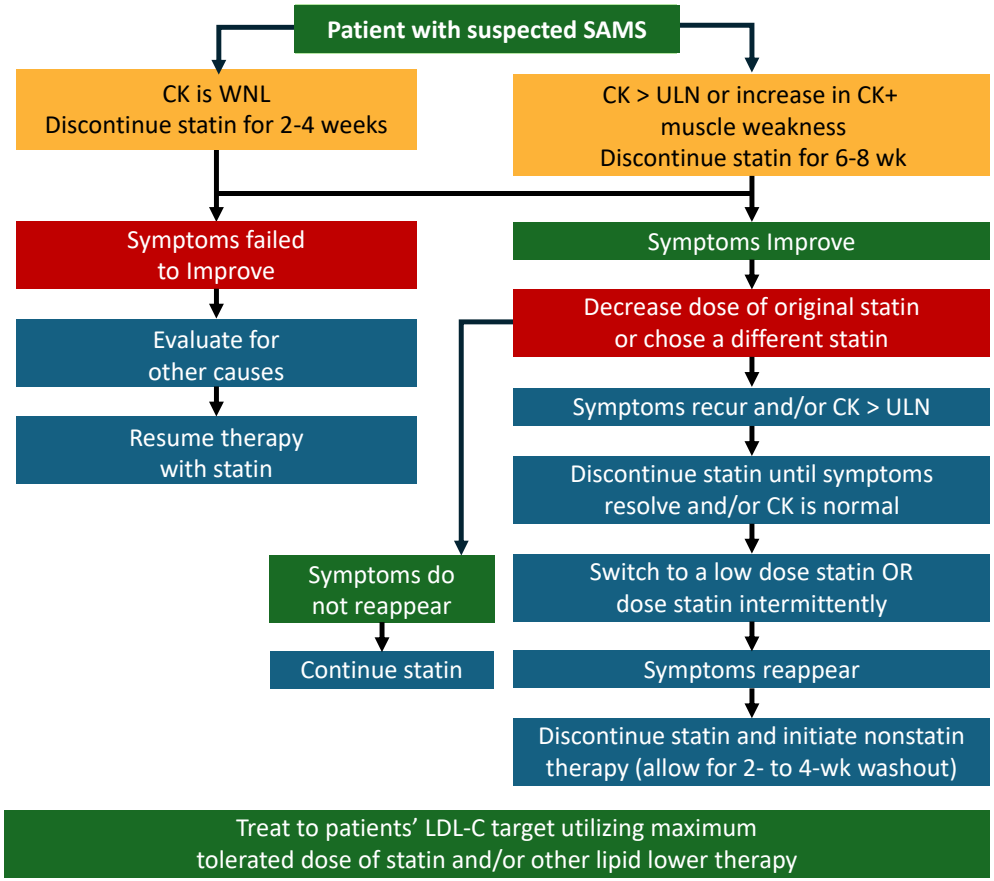
Criteria for Statin Intolerance*:
- Intolerant of ≥2 statins
- 1 trial of the lowest approved daily dose
- Trial of alternative dosing regimen

*Must meet all criteria to be considered statin-intolerant



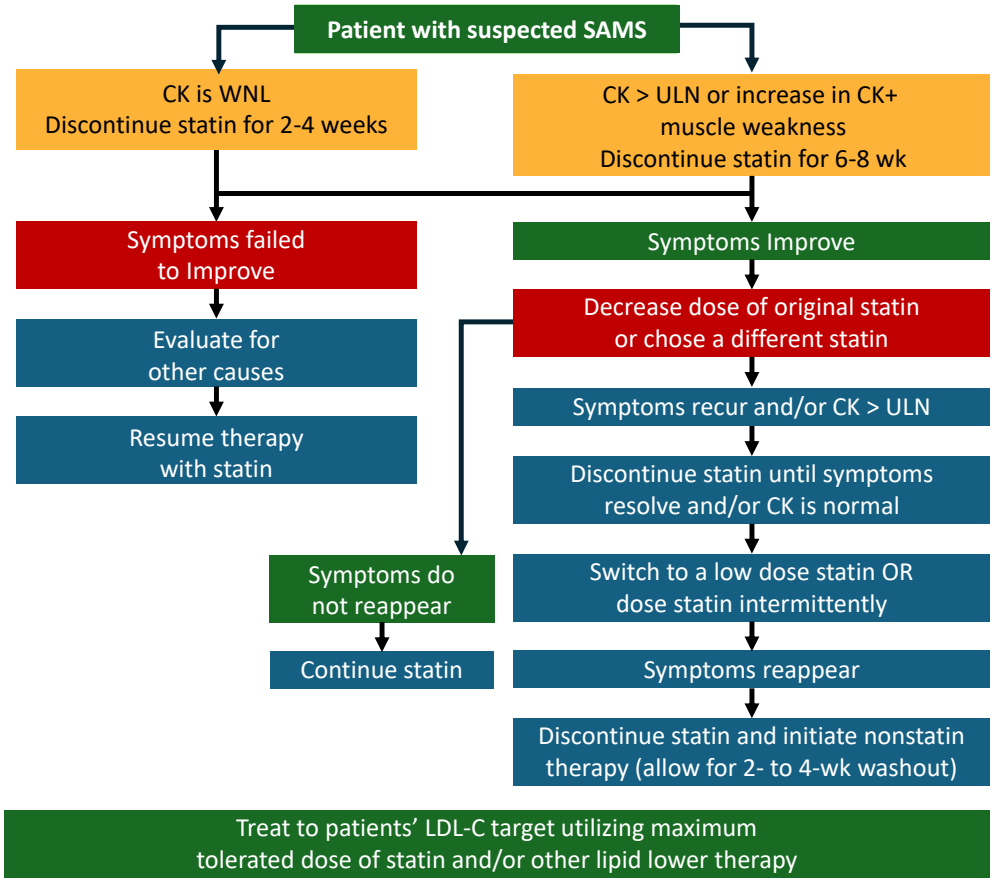
Thompson. J Am Coll Cardiol. 2016;67:2395. Lloyd-Jones. J Am Coll Cardiol. 2022;80;1366.

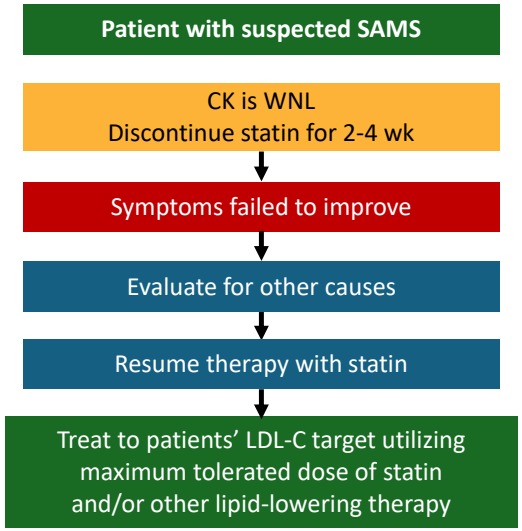
Management of Statin-Associated Muscle Symptoms



Wiggins. Pharmacotherapy. 2022;42:428.

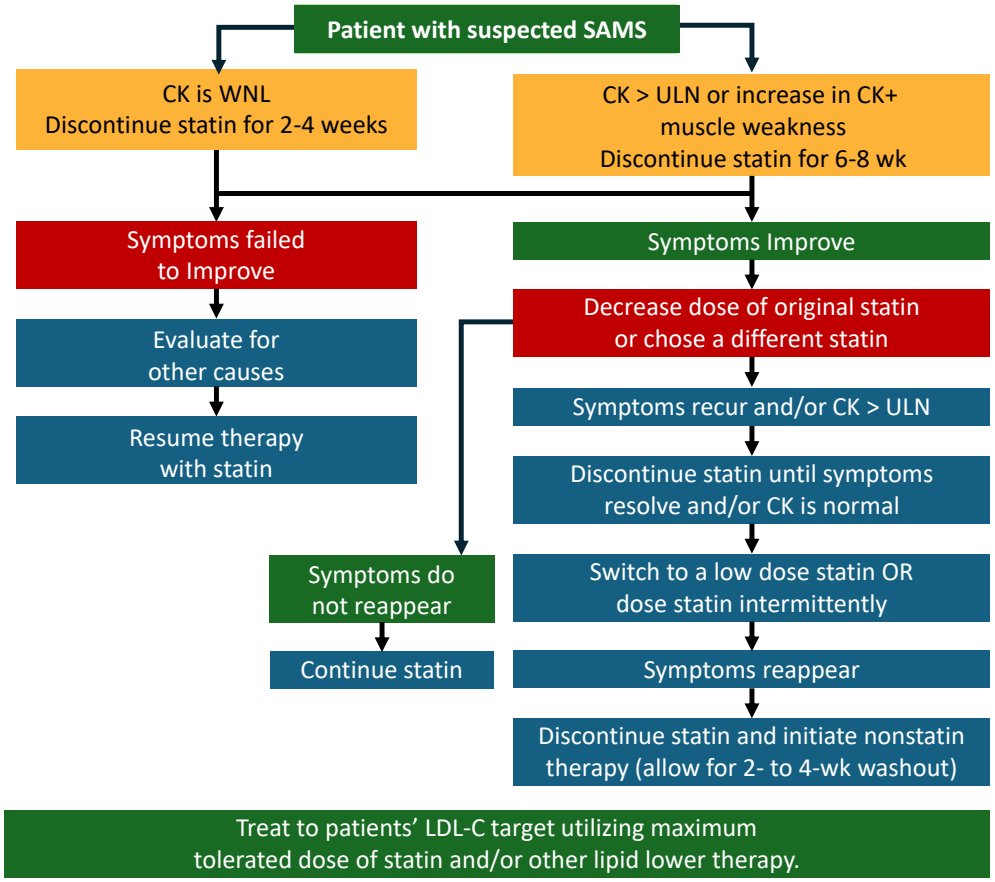
Management of Statin-Associated Muscle Symptoms

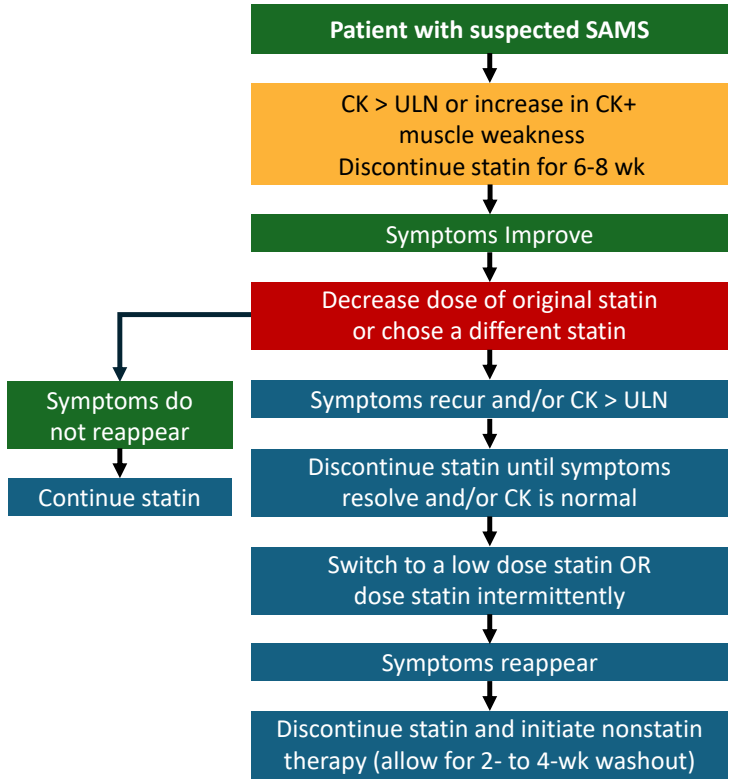




Wiggins. Pharmacotherapy. 2022;42:428.

Management of Statin-Associated Muscle Symptoms



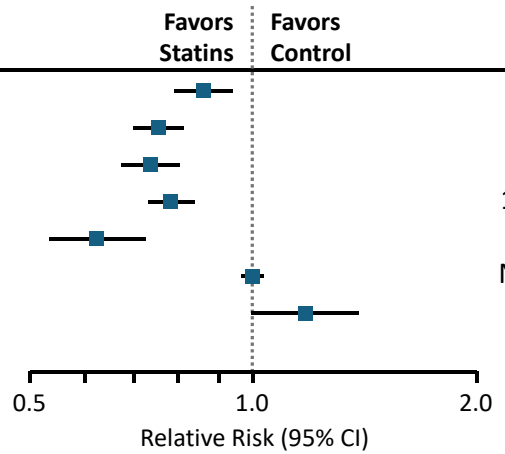


Wiggins. Pharmacotherapy. 2022;42:428.

Statin-Related Safety Concerns: Diabetes

Summary of relative risks and numbers needed to treat for 5 yr for outcomes in primary prevention trials of statins

Outcome	Trials, No.	Statin Events, No.	Statin Total No. of Participants	Placebo/Control Events, No.	Placebo/Control Total No. of Participants	Relative Risk (95% CI)	No. Needed to Treat for 5 Yr (95% CI)
All-cause mortality	13	1077	24408	1223	23652	0.86 (0.79-0.94)	138 (92-321)
Total CVD events	9	1103	11892	1444	11913	0.75 (0.70-0.81)	49 (40-66)
Total CHD events	14	820	24217	1114	23832	0.73 (0.67-0.80)	88 (72-119)
Total stroke events	10	345	20302	442	19993	0.78 (0.68-0.89)	155 (106-309)
Revascularization	7	286	21166	461	21237	0.62 (0.54-0.72)	96 (78-129)
Any adverse event	12	5748	20718	5090	19998	1.00 (0.97-1.03)	Not applicable
Type 2 diabetes	2	342	12205	290	12202	1.18 (1.01-1.39)	99 (46-1778)



Statin therapy is associated with a small increased risk of developing diabetes

Taylor. JAMA. 2013;310:2451.

Statin-Related Safety Concerns: Cognitive Function

Observational analysis of the effect of statin use on 15,200 individuals aged >65 yr with no history of dementia over 4.5 yr

Statin	Low Dose	Mid Dose	High Dose	*P* Value for Trend
Atorvastatin	0.680	0.543	0.305	<.001
Fluvastatin	0.971	0.578	0.255	.058
Lovastatin	1.382	0.930	1.626	.116
Pravastatin	0.662	0.933	0.491	.422
Rosuvastatin	0.365	0.134	0.129	.011
Simvastatin	0.747	0.664	0.510	.064
All statins	0.923	0.806	0.311	<.001

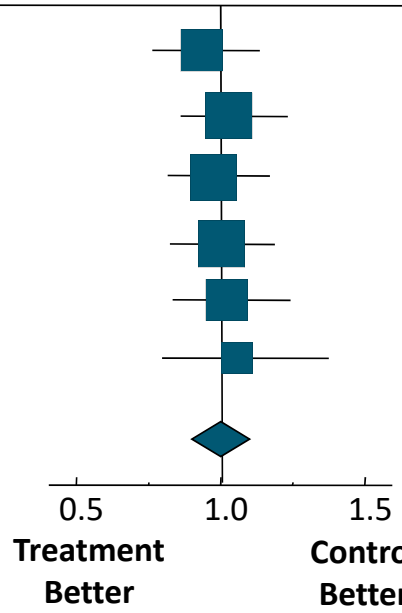
Statin therapy reduces the risk of new onset dementia

Lin. ESC Congress 2013. Abstr 1609.

Statin-Related Safety Concerns: Cancer

Pooled analysis evaluating the effect of statin use on cancer incidence per mmol/L reduction in LDL-cholesterol by yr

	Events (%) Treatment	Control	Rate Ratio (CI)
0-1 yr	412 (1.0)	441 (1.1)	0.95 (0.81-1.12)
1-2 yr	532 (1.4)	513 (1.3)	1.03 (0.89-1.20)
2-3 yr	512 (1.4)	514 (1.4)	0.99 (0.85-1.15)
3-4 yr	494 (1.4)	476 (1.4)	1.00 (0.86-1.16)
4-5 yr	384 (1.3)	374 (1.3)	1.02 (0.86-1.21)
5+ yr	233 (1.3)	218 (1.2)	1.05 (0.84-1.32)
All times	2567 (6.4)	2536 (6.4)	1.00 (0.95-1.06)



Statin therapy has no effect on the incidence of cancer

Cholesterol Treatment Trialists. Lancet. 2005;366:1267.

After initiation, addition, or any change in lipid-lowering therapy, when should a follow-up lipid panel be performed?

2 weeks — 0%

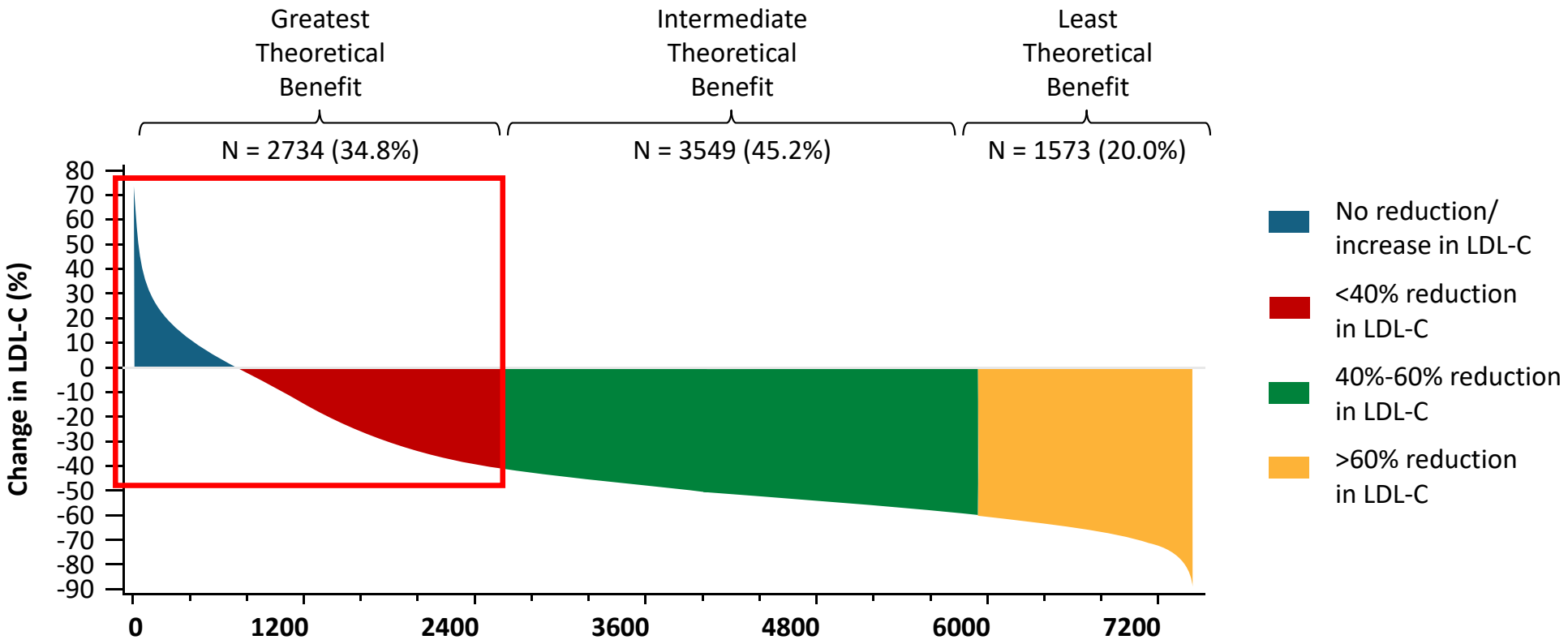
6 weeks — 0%

6 months — 0%

12 months — 0%

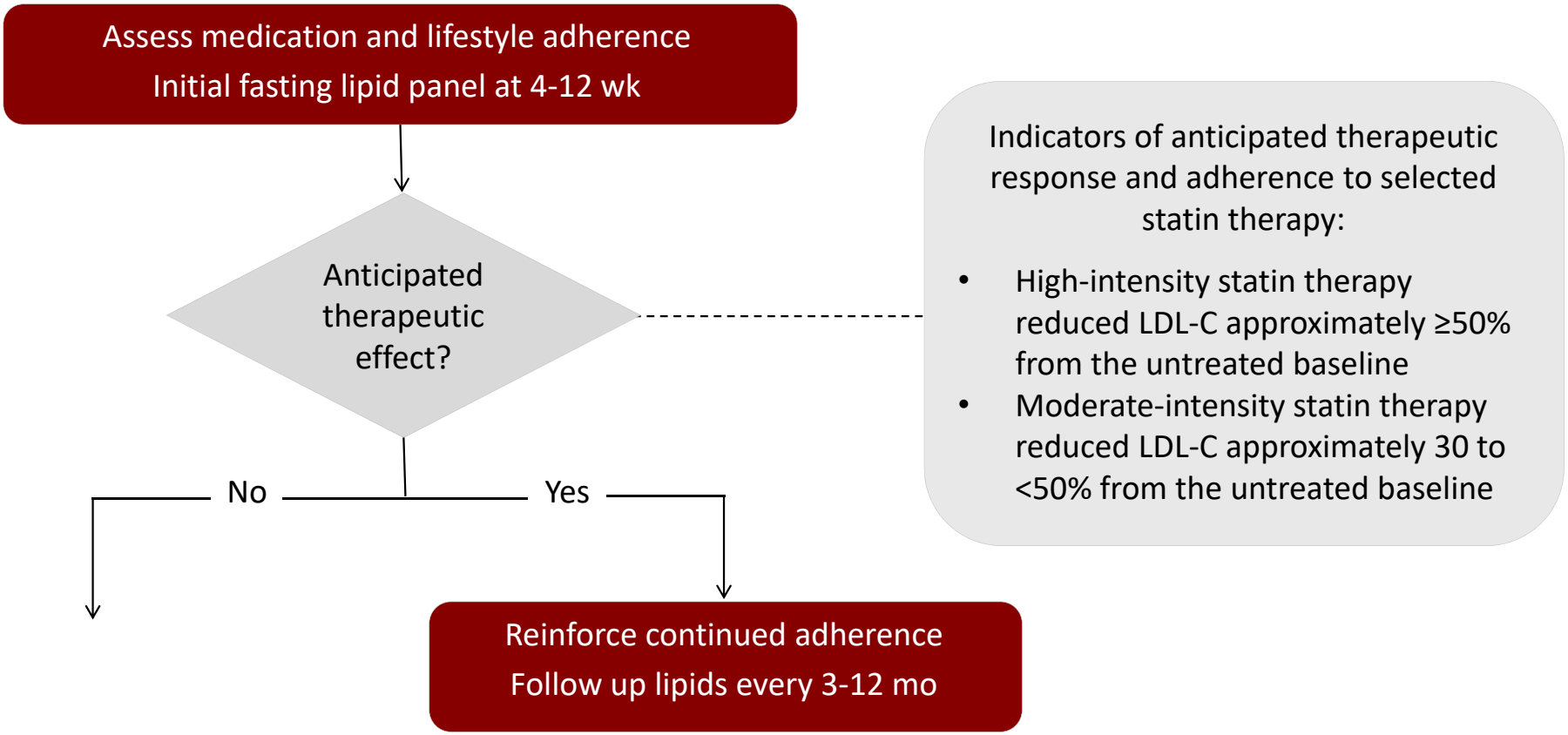
Variability in Response to LDL-C–Lowering Therapy Exists

7856 at-risk primary prevention patients treated with rosuvastatin (20 mg/day)



Ridker. Eur Heart J. 2016;37:1373.

Need to Test to See if You're Where You Need to Be



Stone. J Am Coll Cardiol. 2014;63:2889.

Discussion Point:

What if the patient has trouble getting to clinic to have his labs drawn? What are his options?

Fasting or Nonfasting Lipid Measurements?

Clinical Scenarios	Necessity of Fasting
Estimating initial risk in an untreated primary prevention patient	Nonfasting acceptable
Screening and following patients with family history of genetic hyperlipidemia or premature ASCVD	Fasting required*
Clarifying the diagnosis of metabolic syndrome	Nonfasting acceptable
Estimating residual risk for a treated patient	Fasting preferred
Assessing patients with or at risk for pancreatitis	Fasting preferred†
Diagnosing hypertriglyceridemia	Fasting preferred

*ApoB optional, helpful for an accurate diagnosis. †In emergencies, nonfasting lipids may be assessed when pancreatitis is suspected.

Driver. J Am Coll Cardiol. 2016;67:1227.

Back to the original patient with very high risk ASCVD. He has started high-intensity statin therapy and his LDL-C is now 102 mg/dL at his next follow-up visit. He is started on ezetimibe 10 mg/day. If his LDL-C remains above goal despite this, what is the best next step?

what is the best next step?

Add alirocumab or evolocumab, a PCSK9 inhibitor mAb

0%

Add bempedoic acid, an ATP citrate lyase inhibitor

0%

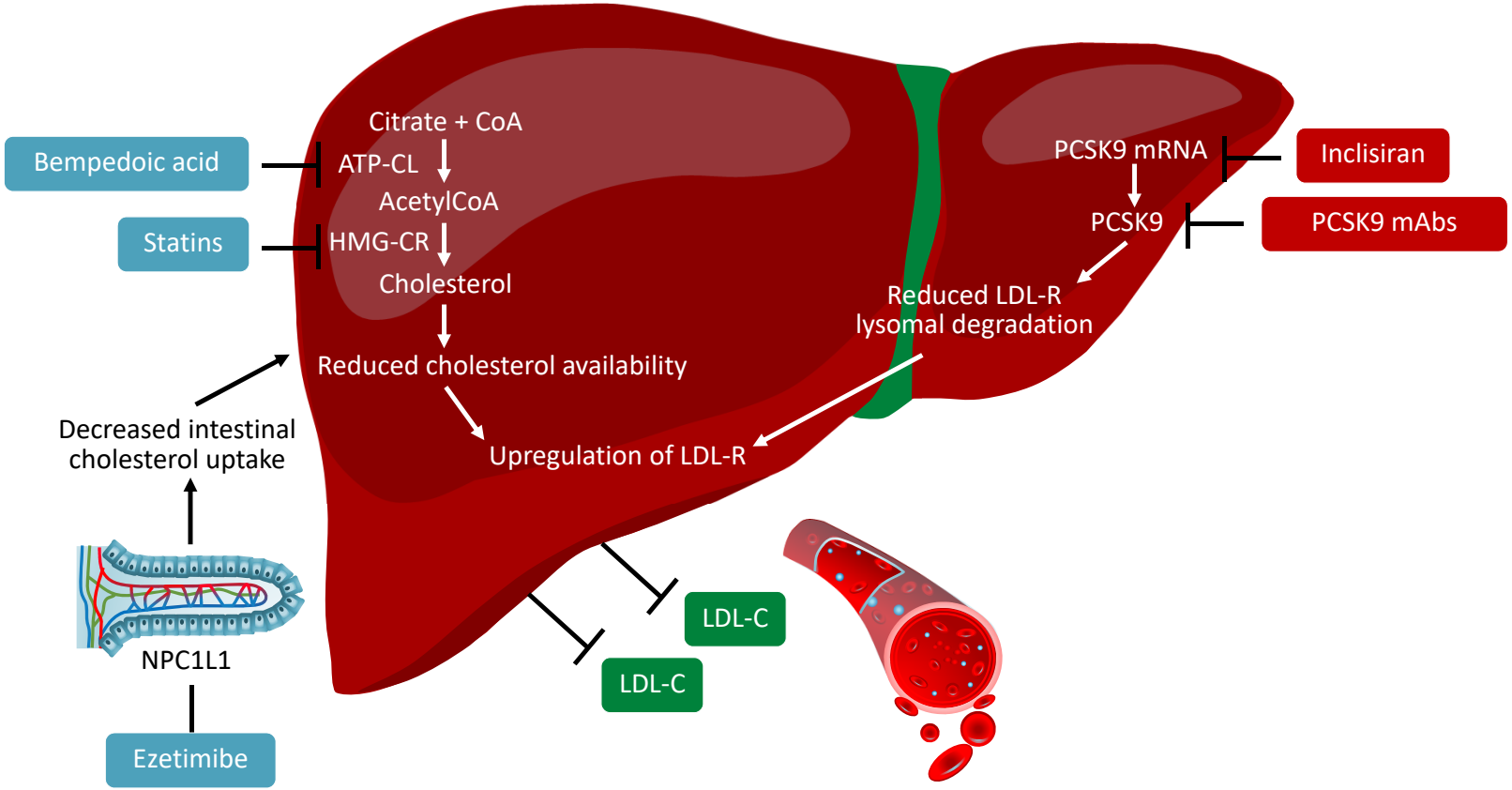
Add colesevelam, a bile acid sequestrant

0%

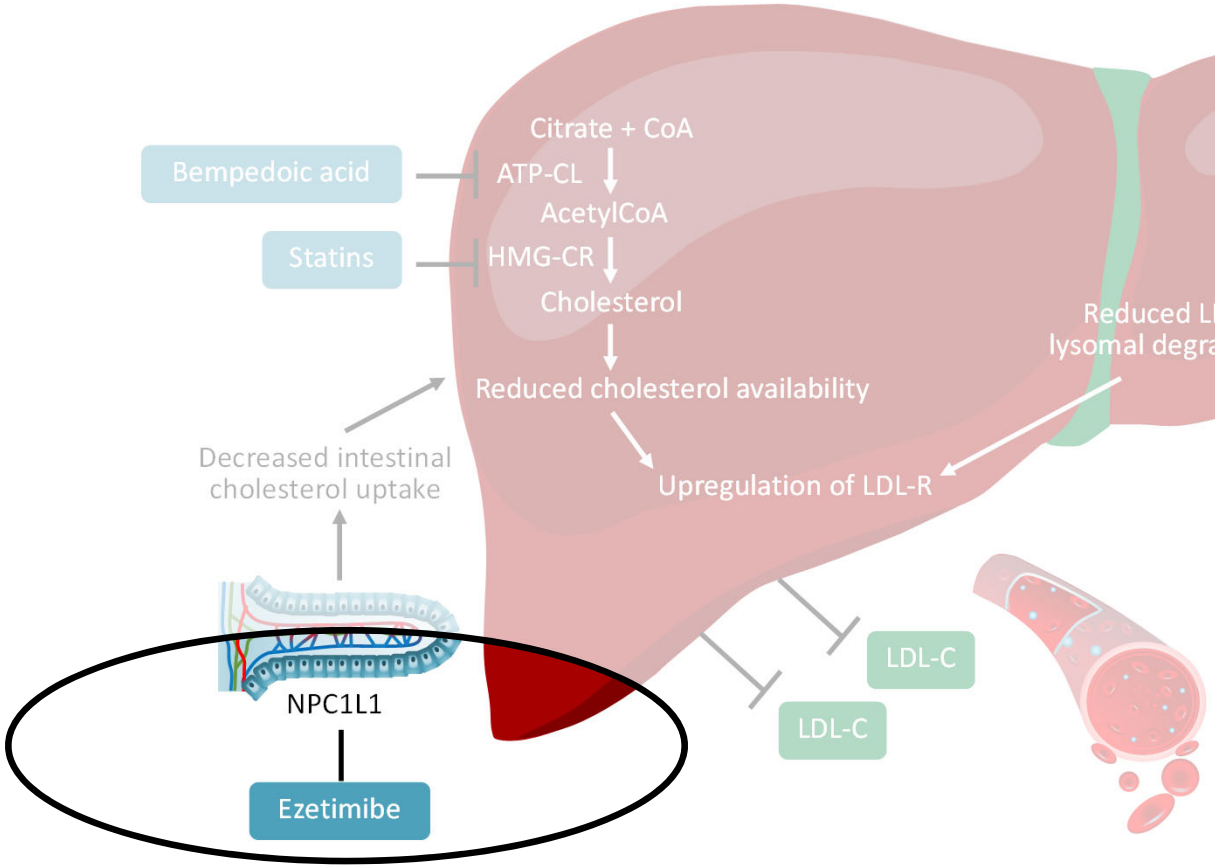
Increase the ezetimibe to 20 mg

0%

Moving Beyond Statin Therapy



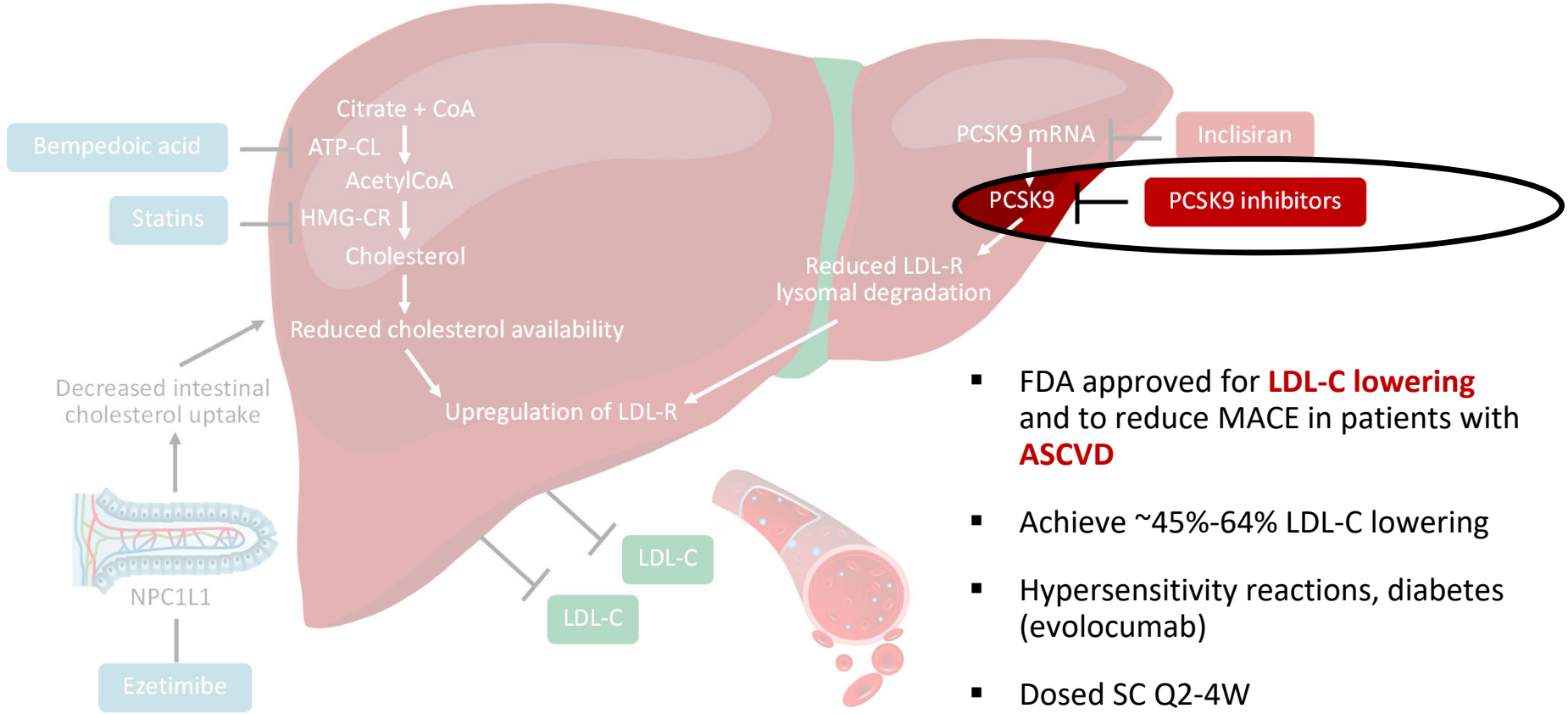
Inhibition of Intestinal Cholesterol Absorption: Ezetimibe



- Daily oral agent, FDA approved for **LDL-C lowering**
- Monotherapy achieves ~18% lowering
- When added to statins, achieves additional 23%-24% lowering
- Not for moderate/severe hepatic impairment

Bardolia. Front Cardiovasc Med. 2021;8:789931. Figure reproduced under terms of Creative Commons Attribution License (CC BY). Cannon. NEJM. 2015;372:2387.

PCSK9i Monoclonal Antibodies: Alirocumab and Evolocumab



- FDA approved for **LDL-C lowering** and to reduce MACE in patients with **ASCVD**
- Achieve ~45%-64% LDL-C lowering
- Hypersensitivity reactions, diabetes (evolocumab)
- Dosed SC Q2-4W

Bardolia. Front Cardiovasc Med. 2021;8:789931. Figure reproduced under terms of Creative Commons Attribution License (CC BY). Alirocumab PI. Evolocumab PI.

You counsel him on appropriate self-administration techniques for a PCSK9 inhibitor monoclonal antibody, but both he and his partner are uncomfortable administering this medication at home. What are reasonable options to consider as an alternative therapy? (Select all that apply)

What are reasonable options to consider as an alternative therapy? (Select all that apply)

Bempedoic acid, an ATP citrate lyase inhibitor

0%

Colesevelam, a bile acid sequestrant

0%

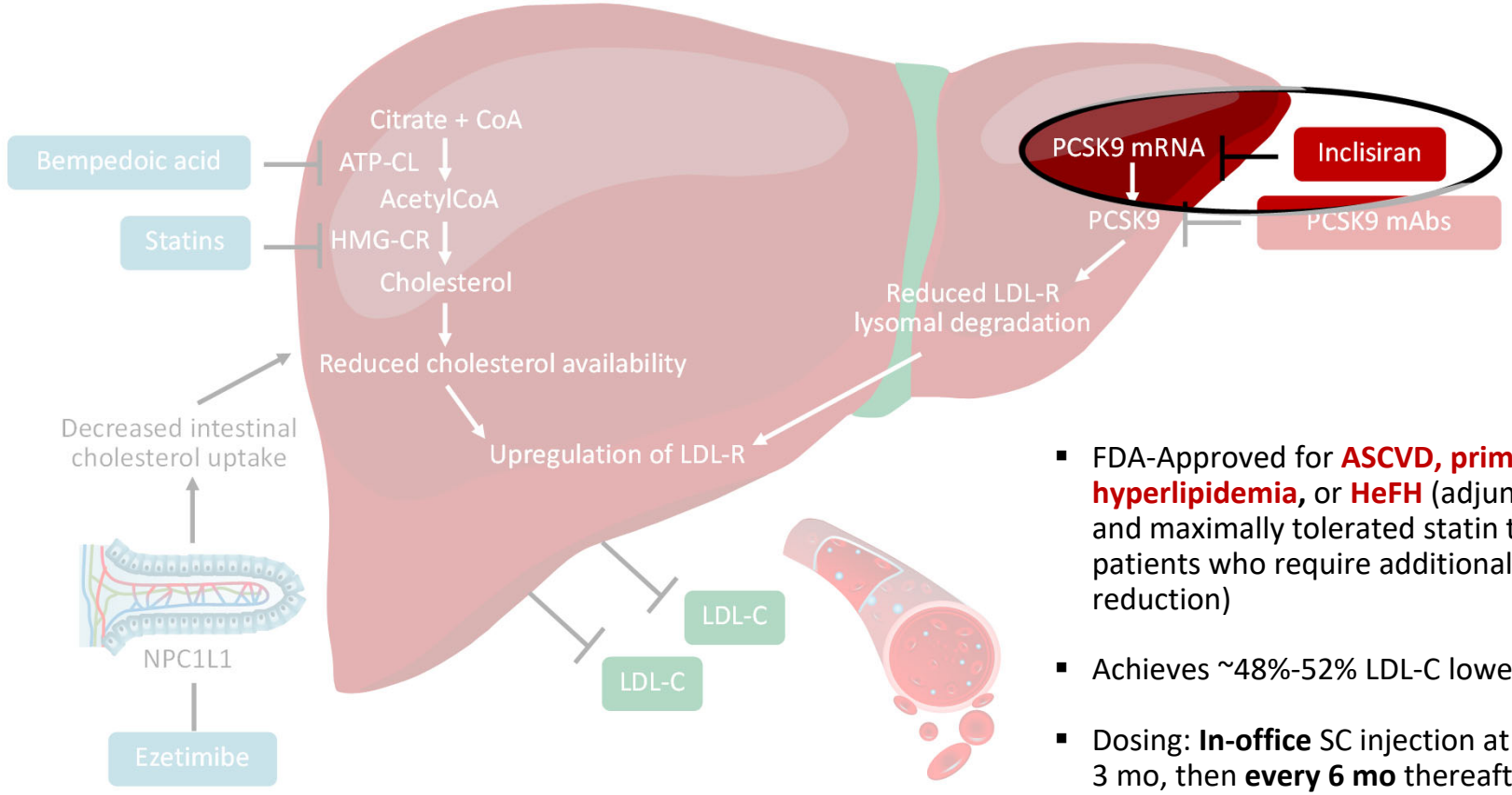
Evinacumab, an ANGPTL3 inhibitor

0%

Inclisiran, a PCSK9 small interfering RNA

0%

PCSK9 siRNA: Inclisiran



- FDA-Approved for **ASCVD, primary hyperlipidemia,** or **HeFH** (adjunct to diet and maximally tolerated statin therapy in patients who require additional LDL-C reduction)
- Achieves ~48%-52% LDL-C lowering
- Dosing: **In-office** SC injection at initiation, 3 mo, then **every 6 mo** thereafter

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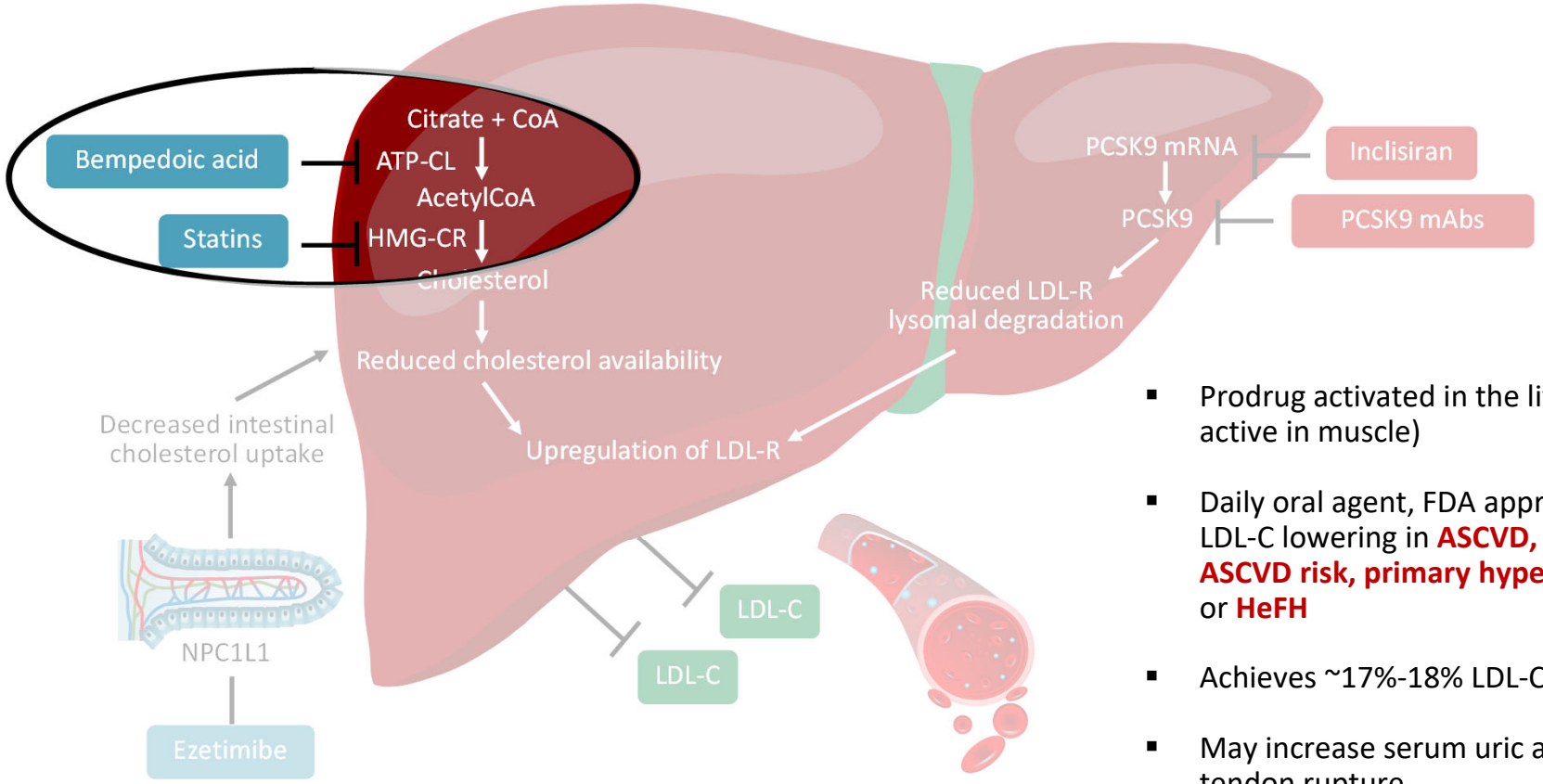
ATP-Citrate Lyase Inhibitor: Bempedoic Acid



- Prodrug activated in the liver (not active in muscle)
- Daily oral agent, FDA approved for LDL-C lowering in **ASCVD, high ASCVD risk, primary hyperlipidemia,** or **HeFH**
- Achieves ~17%-18% LDL-C lowering
- May increase serum uric acid, risk of tendon rupture

Bardolia. Front Cardiovasc Med. 2021;8:789931. Figure reproduced under terms of Creative Commons Attribution License (CC BY). Bempedoic acid PI.

When (if ever) should lipoprotein(a) be measured in this patient?

At his next visit if he has intolerance to 2 statins

0%

At least once in his lifetime

0%

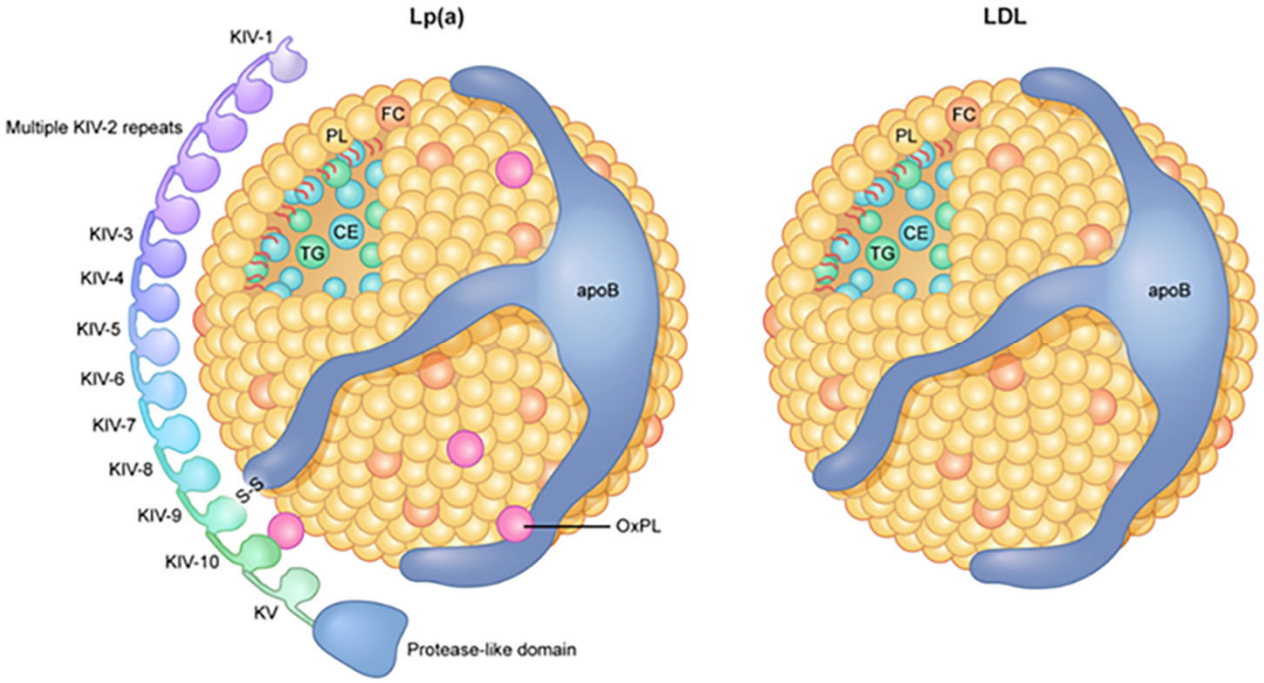
Only if his next lipid panel demonstrates an elevated LDL-C level

0%

Only if the patient has a family history of premature ASCVD

0%

Lipoprotein(a)

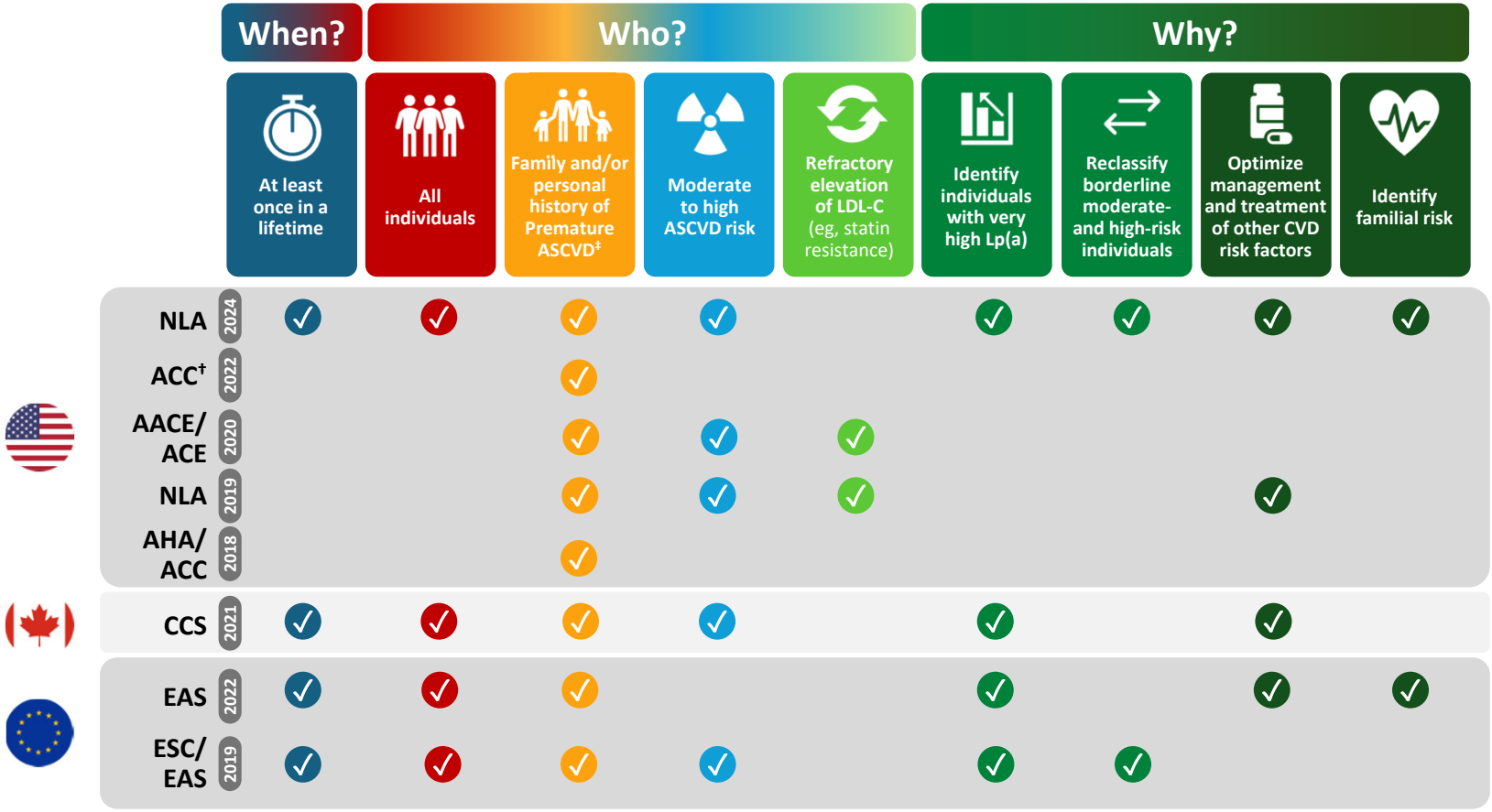


- Lipoprotein(a), or Lp(a), is distinct from LDL-C and comprises a relatively small amount of total cholesterol in the LDL-C pool
- It consists of a single apolipoprotein B particle covalently bound to apolipoprotein(a)
- Levels are largely genetically determined and can be measured either in mass (mg/dL) or molar (nmol/L) units; the latter is preferred

Levels ≥50 mg/dL or 125 nmol/L are associated with an increased risk of ASCVD and calcific aortic stenosis

It is estimated that 20%-25% of individuals have elevated Lp(a) levels

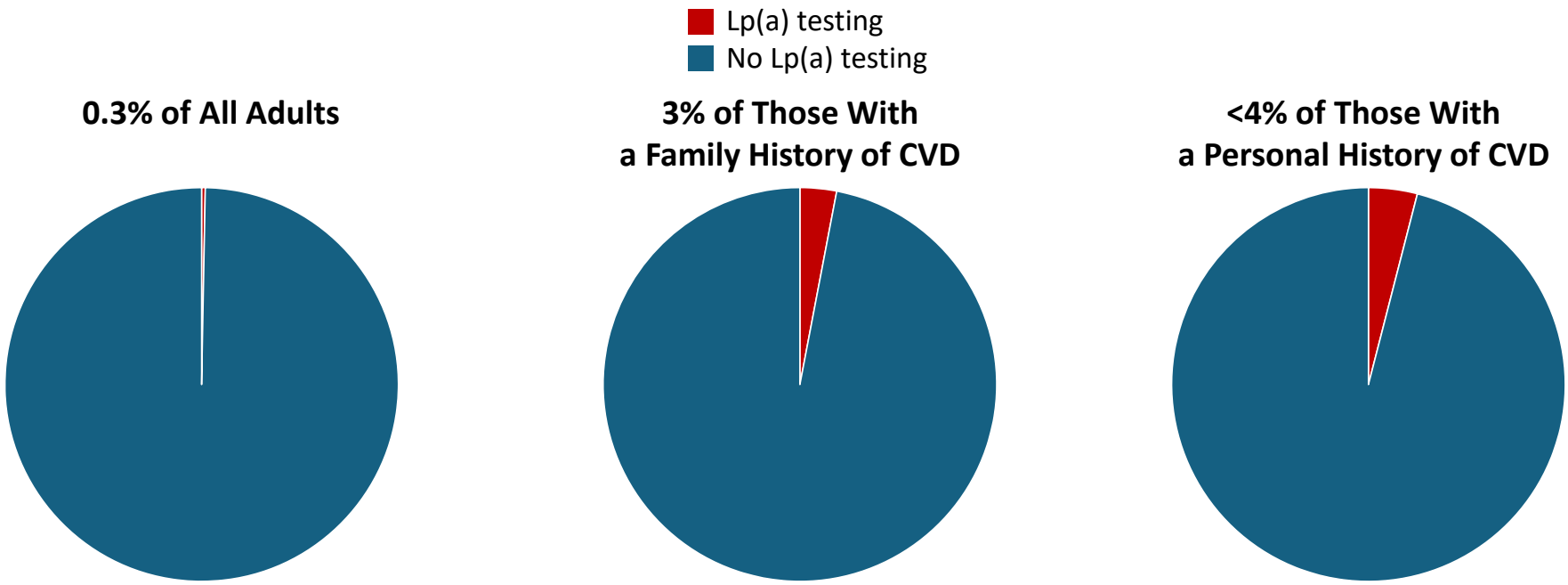
Lp(a) Testing Recommendations



Reyes-Soffer. Am J Prev Cardiol. 2024;18:100651.

Rates of Lp(a) Testing

Observational analysis of 5,553,654 individuals from 6 academic medical centers associated with the University of California to assess the prevalence of lipoprotein(a) testing from 2012-2021



Bhatia. J Am Heart Assoc. 2023;12:031255.

Effect of Available Therapies on Lp(a)

Therapeutic Strategy	Effect on Lp(a)	Effect on LDL-C	Possible Lp(a)-Lowering Mechanism
Apheresis	30%-35% time-averaged reduction	70% reduction	Removal of circulating apoB-100 and/or apo(a)-containing lipoproteins
Statins	9%-20% *increase*	30%-50% reduction	Increased apo(a) synthesis and secretion
Ezetimibe	0%-7% reduction	15%-22% reduction	Unknown
Bempedoic acid	No significant change	17%-28% reduction	
Niacin	21% reduction	12% reduction	Inhibits *LPA* gene expression at the promotor level
PCSK9 mAbs/siRNA	19%-27% reduction	51%-61% reduction	Enhanced clearance and reduced production of Lp(a)

Reyes-Soffer. Am J Prev Cardiol. 2024;18:100651.

Investigational Therapies to Lower Lp(a)

Drug	Mechanism of Action	Mean/Median Lp(a) Reduction	Absolute Lp(a) Reduction (nmol/L)	Current Clinical Trial Stage	Projected Trial Completion
Pelacarsen	Ga1NAc-conjugated ASO targeting apo(a) mRNA	Phase II: 35%-80%	Phase II: 96-188	Phase III [Lp(a)HORIZON]*	2025
Olpasiran	Ga1NAc-conjugated siRNA targeting apo(a) mRNA	Phase II: 70%-97%	Phase II: 250	Phase III [OCEAN(a)-Outcomes]†	2026
Zerlasiran	Ga1NAc-conjugated siRNA targeting apo(a) mRNA	Phase I: 46%-98%	Phase I: 183-259	Phase II	2024
Lepodisiran	Ga1NAc-conjugated siRNA targeting apo(a) mRNA	Phase I: 41%-97%	Phase I: 36-127	Phase II	2024
Muvalaplin	Small molecule inhibitor targeting Lp(a)	Phase I: up to 65%	Phase I: N/A	Phase II [KRAKEN]	2024

*Patients with ASCVD and Lp(a) ≥70 mg/dL (~168 nmol/L) at baseline.
†Patients with ASCVD and Lp(a) ≥200 nmol/L (~83 mg/dL) at baseline.

Reyes-Soffer. Am J Prev Cardiol. 2024;18:100651. NCT04023552. NCT05581303.

Which of the following is a key strategy to improve collaboration between academic medical centers and rural healthcare providers for ASCVD management, particularly for patients who must travel long distances to academic medical centers?

Encouraging all rural providers to refer all patients with ASCVD to academic centers for specialized care 0%

Implementing telemedicine consultations to provide expert guidance on complex ASCVD cases 0%

Encouraging rural providers to manage patients with ASCVD independently without academic support 0%

Limiting academic–rural collaborations to only patients with advanced ASCVD 0%

Academic Medical Center and Rural Hospital Collaboration Can Increase Access to Care

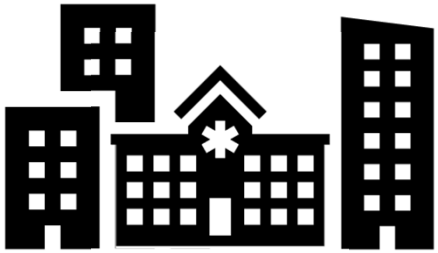
Rural residents benefit:

- Access to advanced CV specialty care
- Less travel burden
- Gateway to tertiary and quaternary level of care

Rural Hospital

Telemedicine Clinics
CV Specialty Clinics
Advanced CV Imaging

Academic Medical Center

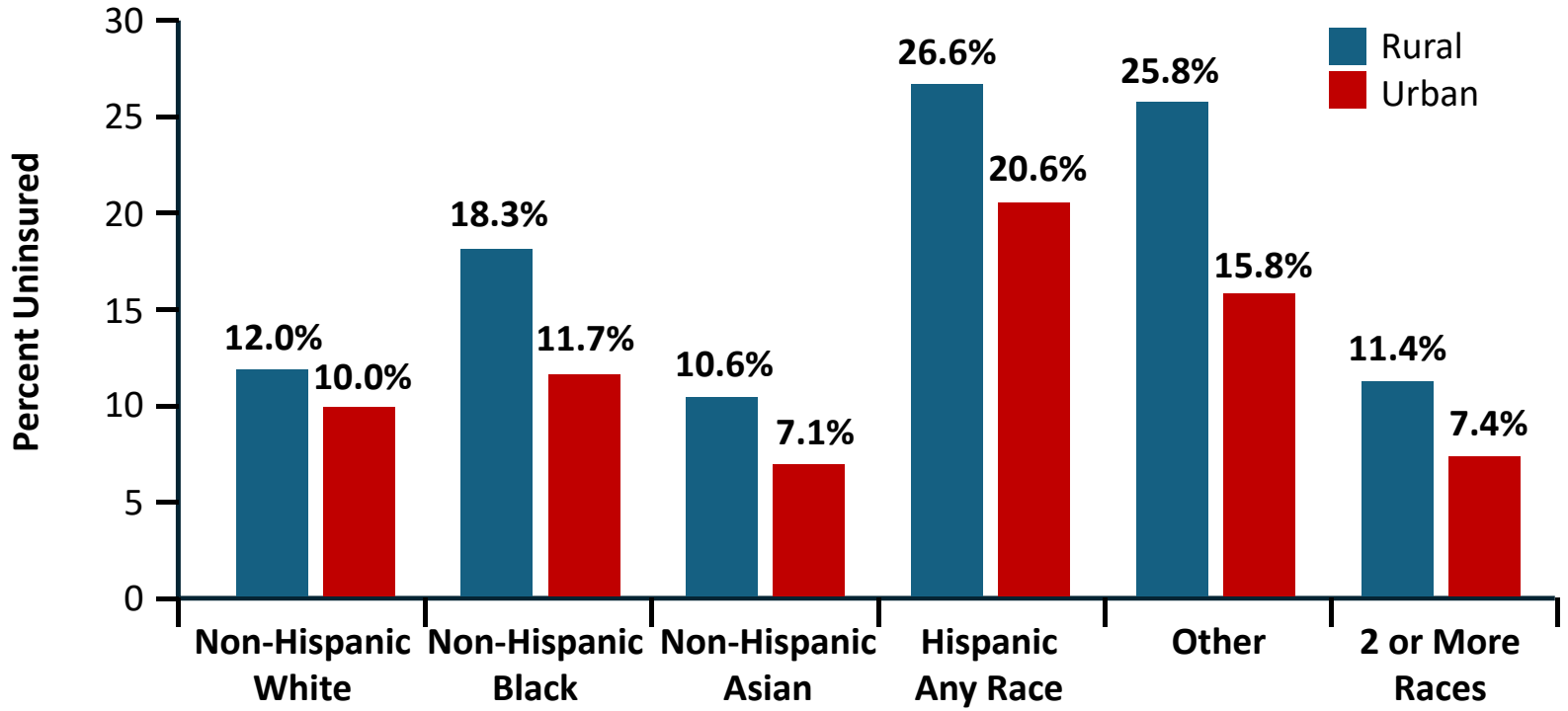


Support rural facilities by providing the following:

- Education
- Physician support for outreach clinics
- CV imaging interpretation
- CV quality support

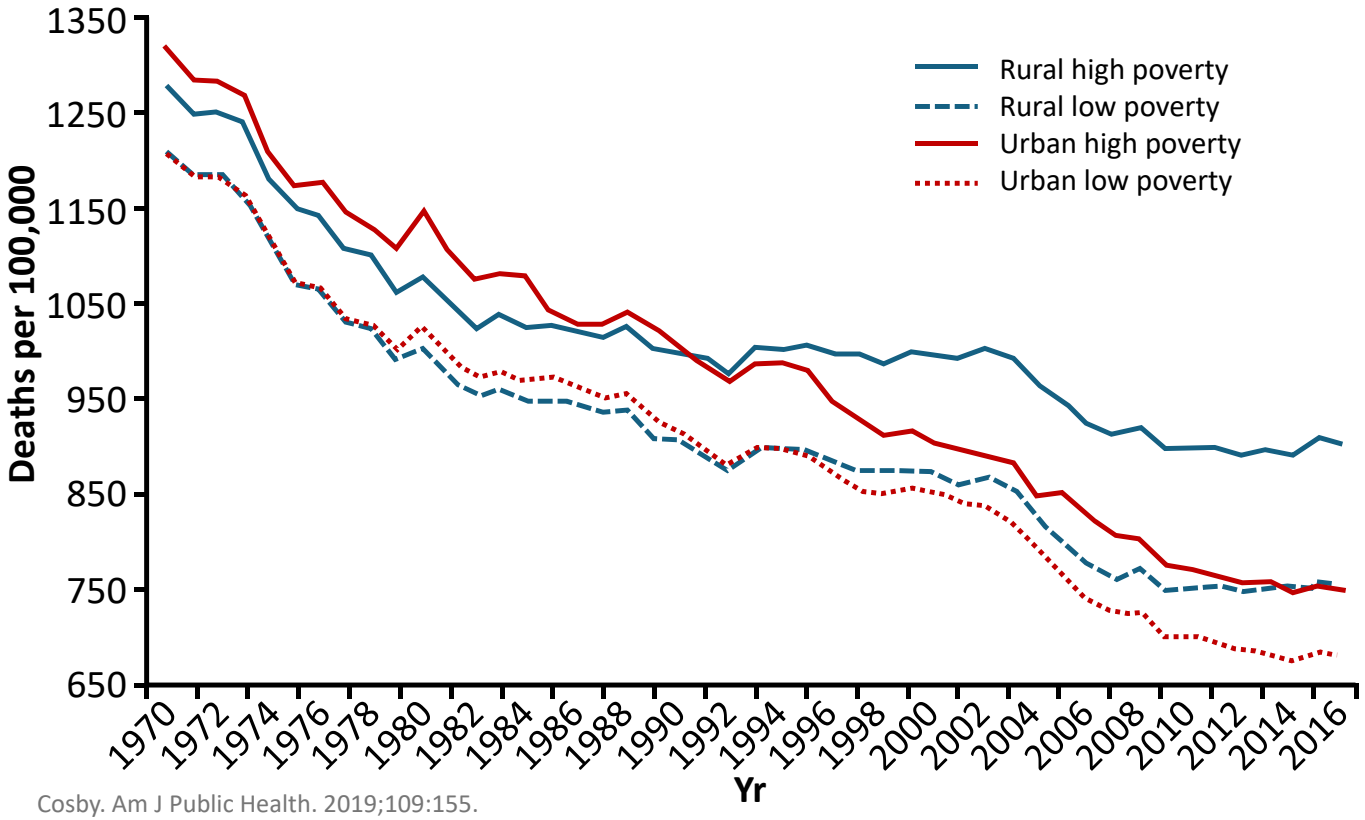
Rajagoplan. JACC Adv. 2024;3:100950.

Uninsurance Rates Higher in Rural vs Urban Areas



rupri.public-health.uiowa.edu/publications/other/Rural%20Insurance%20Chartbook.pdf.

Health Outcomes Are Worse Where Poverty and Rurality Intersect

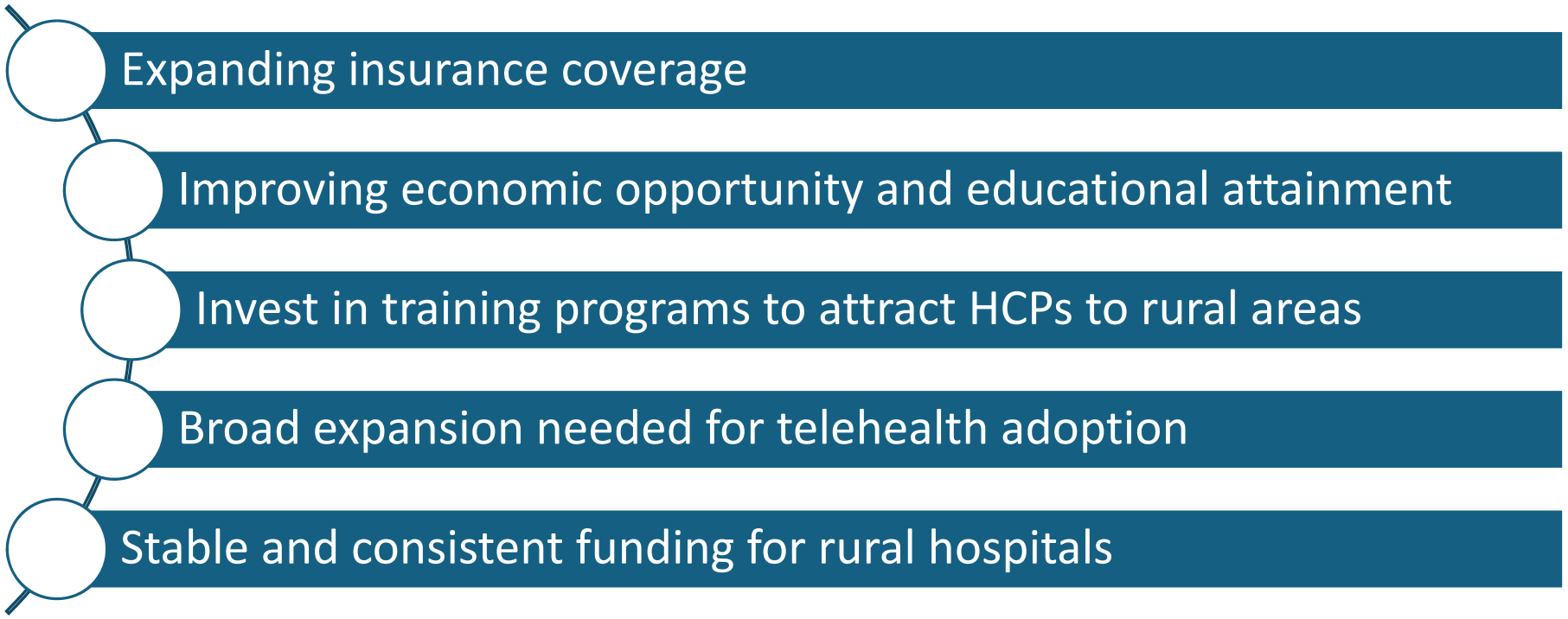


Cosby. Am J Public Health. 2019;109:155.

Other social risk factors:

- Educational attainment
- Food insecurity
- Housing instability

Multidimensional Investment Needed to Improve Rural Cardiovascular Health



A patient with very high–risk ASCVD has started high-intensity statin therapy and his LDL-C is 102 mg/dL at his next follow-up visit. He is started on ezetimibe 10 mg/day. If his LDL-C remains above goal despite this, what is the best next step?

Add alirocumab or evolocumab, a PCSK9 inhibitor mAb — 0%

Add bempedoic acid, an ATP citrate lyase inhibitor — 0%

Add colesevelam, a bile acid sequestrant — 0%

Increase the ezetimibe to 20 mg — 0%

A patient with very high–risk ASCVD has started high-intensity statin therapy and his LDL-C is 102 mg/dL at his next follow-up visit. He is started on ezetimibe 10 mg/day. If his LDL-C remains above goal despite this, what is the best next step?

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B. Add bempedoic acid, an ATP citrate lyase inhibitor

C. Add colesevelam, a bile acid sequestrant

D. Increase the ezetimibe to 20 mg

Rationale: According to the 2022 ACC Expert Consensus Decision Pathway on Nonstatin Therapy, PCSK9 mAbs are preferred nonstatin therapy after ezetimibe because of their significant LDL-C–lowering effect and ability to reduce adverse cardiovascular events. Although bempedoic acid has been shown to reduce cardiovascular events, it is unlikely the patient will achieve his LDL-C goal of <55 mg/dL given its modest LDL-C–lowering effect.

Which of the following is a key strategy to improve collaboration between academic medical centers and rural healthcare providers for ASCVD management, particularly for patients who must travel long distances to academic medical centers?

Encouraging all rural providers to refer all patients with ASCVD to academic centers for specialized care — 0%

Implementing telemedicine consultations to provide expert guidance on complex ASCVD cases — 0%

Encouraging rural providers to manage ASCVD patients independently without academic support — 0%

Limiting academic–rural collaborations to only patients with advanced ASCVD — 0%

Which of the following is a key strategy to improve collaboration between academic medical centers and rural healthcare providers for ASCVD management, particularly for patients who must travel long distances to academic medical centers?

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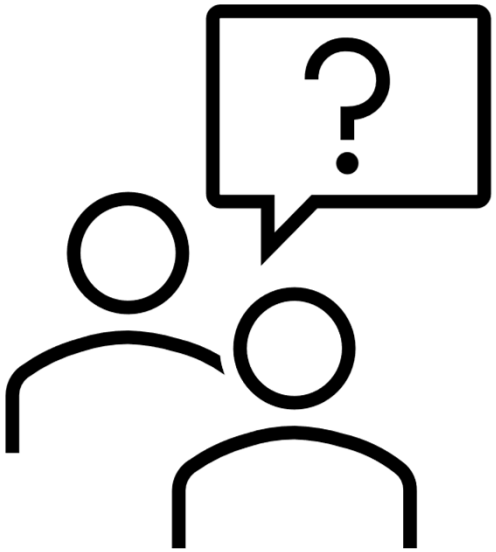
B. Implementing telemedicine consultations to provide expert guidance on complex ASCVD cases

C. Encouraging rural providers to manage ASCVD patients independently without academic support

D. Limiting academic–rural collaborations to only patients with advanced ASCVD

Rationale: Telemedicine allows rural providers to access expert cardiology input from academic centers, improving ASCVD management without requiring patient travel. This strategy enhances continuity of care, guideline adherence, and access to advanced treatment recommendations.

Question and Answer Session



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