Health Services
LOS ANGELES COUNTY

Expected Practices

Specialty: Endocrinology

Subject: Adult Lipid Disorders

Date: March 11, 2014

Purpose: Management of an Adult Patient with a Lipid Disorder (Dyslipidemia)

Target Audience: Primary Care Providers

Expected Practice:

1. Measure baseline fasting lipid panel in every patient 20 or older, at least yearly in those with diabetes and then at least every 5 years in those without diabetes. Hepatic transaminases should be measured every time lipids are measured.

2. At each visit, patients should be counseled about dietary fat and simple carbohydrate reduction.

3. Goal level of LDL cholesterol is <70 mg/dL if patient has overt cardiovascular disease (CVD), <100 mg/dL in patients with diabetes, 130 mg/dL in patients without diabetes and 2 or more risk factors, 160 mg/dL in patients without diabetes and 0 or 1 risk factors.

4. Almost all patients with diabetes ≥40 years old should be taking a statin regardless of baseline LDL cholesterol concentration. Most patients with diabetes and <40 years whose LDL cholesterol remains above goal levels after life style modification or have multiple CVD risk factors should also be started on a statin.

5. In patients without overt CVD or diabetes, risk stratification should be performed as follows:

This *Expected Practice* was developed by a DHS Specialty-Primary Care Work Group to fulfill the DHS mission to ensure access to high-quality, patient-centered, and cost-effective health care. SPC Work Groups, composed of specialist and primary care provider representatives from across LA County DHS, are guided by 1) real-life practice conditions at our facilities, 2) available clinical evidence, and 3) the principle that we must provide equitable care for the entire population that LA County DHS is responsible for, not just those that appear in front of us. It is recognized that in individual situations a provider's clinical judgment may vary from this *Expected Practice*, but in such cases compelling documentation for the exception should be provided in the medical record.

Risk Category	Risk Factors	Statin Therapy Initiation	Risk Factors:
Low	0-1	≥190 mg/dL	• Smoking • BP >140/90 or on anti-hypertensive medications • HDL <40 mg/dL • Family history of 1st degree relative with early heart disease (male before 55, female before 65) • Age > 45 male, age> 55 female, or post-menopausal female • If HDL > 60 mg/dL, subtract 1 risk factor.
Moderate	2 or more	≥130 mg/dL	

Providers may also use the Framingham Risk Calculator (http://cvdrisk.nhlbi.nih.gov):

- For those with a 10-risk 10-20%, start stain for LDL ≥130 mg/dL
- For those with 10-year risk <10%, start stain for LDL ≥160 mg/dL

5. Drug titration:

Patients should be started on first line statins (simvastatin or pravastatin) to achieve LDL target and LDL and LFTs checked a month after starting new dose. Second line therapy (atorvastatin) should be used if targets are not achieved. At each visit, patients should be counseled about dietary fat and simple carbohydrate reduction. They should be reminded to take their medicines daily. Providers should be aware of drug interactions (see below for diltiazem, amlodipine). If goal is not met on 80 mg atorvastatin, if questions about titration or if patient is not tolerating any statin, **consult endocrinology via eConsult.**

Stepwise therapy	Relative LDL Reduction	30%	38%	41%
First line	Simvastatin	10 mg	20 mg	40 mg
	Pravastatin	20 mg	40 mg	80 mg
Second line	Atorvastatin	------	40 mg	80 mg
Drug Interactions	Diltiazem	Maximum dose of Simvastatin **10 mg** daily		
	Amlodipine	Maximum dose of Simvastatin **20 mg** daily		

6. If initial triglyceride (TG) concentration is ≥1000 mg/dL, make sure the patient's diabetes (if they have diabetes) is well controlled, advise alcohol and dietary fat reduction and start fenofibrate at 200 mg daily. Then measure lipid profile and LFTs in one month. Consider **consulting endocrinology via eConsult.**

a. If TG concentration remains ≥1000 mg/dL, continue fenofibrate and start niaspan 500 mg at bedtime with an aspirin (325 mg) 30 min before. Titrate up niaspan by 500 mg a week until 2000 mg at bedtime is reached. Recheck TG concentration in one month after maximum dose is reached.
b. If TG concentration remains ≥1000 mg/dL, **consult endocrinology via eConsult**.
c. If TG concentration <400 mg/dL, discontinue fenofibrate and recheck in 1 month. Restart fenofibrate if subsequent TG concentrations increase to ≥1000 mg/dL and **consult endocrinology via eConsult**.

7. When LDL is at goal, measure lipids every four months. Intensify treatment as described above if lipids increase above goal levels.

8. If liver tests are > 3X normal, decrease statin in half. If liver tests are > 5X normal, stop statin and **consult endocrinology via eConsult**.

9. If myalgias present, check CPK and consider switching to a different statin. If CPK is high, **consult endocrinology via eConsult.**

10. For assistance and if there are questions, please contact the **consult endocrinology via eConsult**. Please provide the Fasting Lipid Profile (Total Cholesterol, TG, HDL, and LDL) and Liver Function Tests. Please also document failed treatments or contraindications (myalgias, increased LFTs) to treatment.

References:

Stone NJ, et al. Treatment of Blood Cholesterol to Reduce Atherosclerotic Cardiovascular Disease Risk in Adults: Synopsis of the 2013 ACC/AHA Cholesterol Guideline. Ann Intern Med. 2014 Jan 28. doi: 10.7326/M14-0126

Executive Summary of The Third Report of The National Cholesterol Education Program (NCEP) Expert Panel on Detection, Evaluation, And Treatment of High Blood Cholesterol In Adults (Adult Treatment Panel III) JAMA. 2001 May 16;285:2486-97.