



# Michigan Quality Improvement Consortium Guideline

## Screening and Management of Hypercholesterolemia

The following guideline recommends risk assessment, stratification, education, counseling and pharmacological interventions for the management of low density lipoprotein cholesterol (LDL-C)

Eligible Population	Key Components	Recommendation and Level of Evidence							
Age $\geq$ 18 years	Risk Assessment	<ul style="list-style-type: none"> <li>Screening: Initial fasting lipid profile (i.e., total, LDL-C, HDL-C, triglycerides); If normal, repeat at least every five years. [D]</li> <li>Treatment is based on LDL-C, major risk factors and presence of CHD or equivalent.</li> </ul>							
		<p><b>Major Risk Factors:</b></p> <ul style="list-style-type: none"> <li>Cigarette smoking</li> <li>Hypertension (BP <math>\geq</math> 140/90)</li> <li>On antihypertensives, regardless of current BP levels</li> <li>HDL-C: &lt; 40 (HDL-C <math>\geq</math> 60 = negative risk factor)</li> <li>Family history (first degree) of premature CHD (men &lt; 55 years; women &lt; 65 years)</li> <li>Age (men <math>\geq</math> 45 years; women <math>\geq</math> 55 years)</li> </ul>	<p><b>CHD Risk Equivalents:</b></p> <ul style="list-style-type: none"> <li>Other clinical forms of atherosclerotic disease (e.g., peripheral arterial disease, abdominal aortic aneurysm, and/or symptomatic carotid artery disease)</li> <li>Diabetes plus one additional risk factor (diabetes alone is not considered a risk equivalent*)</li> <li>Multiple risk factors confer a 10-year risk for CHD &gt; 20%</li> <li>CHD and CHD risk equivalents give a &gt; 20% risk of a CHD event within 10 years</li> </ul>						
Age $\geq$ 18 years	Risk Stratification	<ul style="list-style-type: none"> <li><b>Calculate short-term risk for patients with 2+ risk factors using Framingham projection of 10-year absolute risk [D]:</b></li> </ul>							
		<table border="1"> <thead> <tr> <th>Categorical Risk</th> <th>Goal for LDL-C</th> </tr> </thead> <tbody> <tr> <td> <ul style="list-style-type: none"> <li>CHD or CHD risk equivalents</li> <li>10-year risk: &gt; 20%</li> </ul> </td> <td>&lt; 100 mg/dL</td> </tr> <tr> <td> <ul style="list-style-type: none"> <li>2+ risk factors</li> <li>10-year risk: <math>\leq</math> 20%</li> </ul> </td> <td>&lt; 130 mg/dL</td> </tr> <tr> <td> <ul style="list-style-type: none"> <li>0 - 1 risk factor</li> </ul> </td> <td>&lt; 160 mg/dL</td> </tr> </tbody> </table>	Categorical Risk	Goal for LDL-C	<ul style="list-style-type: none"> <li>CHD or CHD risk equivalents</li> <li>10-year risk: &gt; 20%</li> </ul>	< 100 mg/dL	<ul style="list-style-type: none"> <li>2+ risk factors</li> <li>10-year risk: <math>\leq</math> 20%</li> </ul>	< 130 mg/dL	<ul style="list-style-type: none"> <li>0 - 1 risk factor</li> </ul>
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Age $\geq$ 18 years	Education and risk factor modification	<p>Educate patient/family regarding Therapeutic Lifestyle Changes (TLC):</p> <ul style="list-style-type: none"> <li>Reduce saturated fats and cholesterol [A], increase plant stanols/sterol (e.g. cholesterol-lowering margarines), increase viscous soluble fiber (e.g. oats, barley, lentils, beans), consider increasing fish consumption (Omega-3 fatty acids).</li> <li>Decrease weight and increase exercise to moderate level of activity for 30 minutes, most days of the week [A].</li> </ul>							
	Pharmacologic interventions	<ul style="list-style-type: none"> <li>TLC and/or drug therapy may be initiated based on the LDL-C level and/or presence of CHD risk or CHD risk factors.</li> <li>Initiate statin therapy for patients with CHD, CHD risk equivalents, or if the LDL-C is not at goal by 3 months after TLC have begun in earnest.</li> <li>Statins are the most commonly used lipid-lowering agents. Liver function test monitoring is recommended at 3 months following treatment initiation, or dosage increases, of any statin. For prolonged myalgias, consider dosage reduction or statin change.</li> <li>Evaluate and adjust drug therapy every 3 months until goal achieved.</li> <li>For patients who do not reach LDL-C goal, consider referral to lipid specialist.</li> </ul>							

\*Not all national guidelines agree

**Levels of Evidence for the most significant recommendations: A = randomized controlled trials; B = controlled trials, no randomization; C = observational studies; D = opinion of expert panel**

This guideline represents core management steps. It is based on several sources, including: Lipid Management in Adults, Institute for Clinical Systems Improvement, 2007 ([icsi.org](http://www.icsi.org)).

Individual patient considerations and advances in medical science may supersede or modify these recommendations.