# Michigan Quality Improvement Consortium Guideline

**Screening and Management of Hyperlipidemia**

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

## Eligible Population

<table>
<thead>
<tr>
<th>Age &gt; 18 years</th>
<th>Risk Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screening: Initial fasting lipid profile (i.e., total, LDL-C, HDL-C, triglycerides); If normal repeat at least every five years [D]</td>
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<tr>
<td>Treatment is based on LDL-C, major risk factors and presence of CHD or equivalent.</td>
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</tbody>
</table>

### Major Risk Factors:

- Cigarette smoking
- Hypertension (BP > 140/90)
- On antihypertensives, regardless of current BP levels
- HDL-C: < 40 (HDL-C > 60 = negative risk factor)
- Family history (first degree) of premature CHD (men < 55 years; women < 65 years)
- Age (men ≥ 45 years; women ≥ 55 years)

### CHD Risk Equivalents:

- Other clinical forms of atherosclerotic disease (e.g., peripheral arterial disease, abdominal aortic aneurysm, and/or symptomatic carotid artery disease)
- Diabetes
- Multiple risk factors confer a 10-year risk for CHD > 20%
- CHD and CHD risk equivalents give a > 20% risk of a CHD event within 10 years

## LDL > 100

### Risk Stratification

- Calculate short-term risk for patients with 2+ risk factors using Framingham projection of 10-year absolute risk [D]:

<table>
<thead>
<tr>
<th>Categorical Risk</th>
<th>Goal for LDL-C</th>
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</thead>
<tbody>
<tr>
<td>CHD or CHD risk equivalents</td>
<td></td>
</tr>
<tr>
<td>10-year risk: &gt; 20%</td>
<td>&lt; 100 mg/dL</td>
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<tr>
<td>2+ risk factors</td>
<td></td>
</tr>
<tr>
<td>10-year risk: &lt; 20%</td>
<td>&lt; 130 mg/dL</td>
</tr>
<tr>
<td>0 - 1 risk factor</td>
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<tr>
<td>&lt; 160 mg/dL</td>
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### Education and risk factor modification

- Educate patient/family regarding Therapeutic Lifestyle Changes (TLC): 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).
- Decrease weight and increase exercise to moderate level of activity for 30 minutes, most days of the week [A].

### Pharmacologic interventions

- TLC and/or drug therapy may be initiated based on the LDL-C level and/or presence of CHD risk or CHD risk factors.
- Initiate statin therapy for patients with atherosclerotic CHD or when the LDL-C is not at goal by 6 - 8 weeks after TLC have begun in earnest.
- Statins are the most commonly used lipid-lowering agents. Liver function test monitoring is recommended for 12 weeks following treatment initiation, or dosage increases, of any statin.
- Evaluate and adjust drug therapy at 6 - 8 week intervals.
- For patients who do not reach LDL-C goal, consider referral to lipid specialist.

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**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, 2006 ([www.icsi.org](http://www.icsi.org)). Individual patient considerations and advances in medical science may supersede or modify these recommendations.

Approved by MQIC Medical Directors 08/07