



Complete Summary

GUIDELINE TITLE

Screening and management of hyperlipidemia.

BIBLIOGRAPHIC SOURCE(S)

Michigan Quality Improvement Consortium. Screening and management of hyperlipidemia. Southfield (MI): Michigan Quality Improvement Consortium; 2007 Aug. 1 p.

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: Michigan Quality Improvement Consortium. Screening and management of hyperlipidemia. Southfield (MI): Michigan Quality Improvement Consortium; 2005 Aug. 1 p.

COMPLETE SUMMARY CONTENT

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SCOPE

DISEASE/CONDITION(S)

Hyperlipidemia

GUIDELINE CATEGORY

Management
Risk Assessment
Screening
Treatment

CLINICAL SPECIALTY

Cardiology
Family Practice
Internal Medicine

INTENDED USERS

Advanced Practice Nurses
Health Plans
Physician Assistants
Physicians

GUIDELINE OBJECTIVE(S)

- To achieve significant, measurable improvements in the screening and management of hyperlipidemia through the development and implementation of common evidence-based clinical practice guidelines
- To design concise guidelines that are focused on key management components of hyperlipidemia to improve outcomes

TARGET POPULATION

- Patients age ≥ 18 years (Screening)
- Patients age ≥ 18 years with low density lipoprotein cholesterol (LDL-C) >100 (Management)

INTERVENTIONS AND PRACTICES CONSIDERED

Screening/Risk Assessment

1. Initial fasting lipid profile (total cholesterol, low-density lipoprotein cholesterol [LDL-C], high-density lipoprotein cholesterol [HDL-C], triglycerides)
2. Assessment of major risk factors and coronary heart disease (CHD) risk factors
3. Calculation for short-term risk using Framingham projection of 10-year absolute risk

Management/Treatment

1. Patient/family education including risk factor modification
2. Pharmacologic intervention
3. Referral to lipid specialist, if necessary

MAJOR OUTCOMES CONSIDERED

Not stated

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

The Michigan Quality Improvement Consortium (MQIC) project leader conducts a search of current literature in support of the guideline topic. Computer database searches are used to identify published studies, existing protocols and/or national guidelines on the selected topic developed by organizations such as the American Diabetes Association, American Heart Association, American Academy of Pediatrics, etc. If available, clinical practice guidelines from participating MQIC health plans and Michigan health systems are also used to develop a framework for the new guideline.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

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

METHODS USED TO ANALYZE THE EVIDENCE

Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Using information obtained from literature searches and available health plan guidelines on the designated topic, the Michigan Quality Improvement Consortium (MQIC) project leader prepares a draft guideline to be reviewed by the medical directors' committee at one of their scheduled meetings. Priority is given to recommendations with [A] and [B] levels of evidence (see "Rating Scheme for the Strength of the Evidence" field).

The initial draft guideline is reviewed, evaluated, and revised by the committee resulting in draft two of the guideline. Additionally, the Michigan Academy of Family Physicians participates in guideline development at the onset of the process and throughout the guideline development procedure. The MQIC guideline feedback form and draft two of the guideline are distributed to the medical directors, as well as the MQIC measurement and implementation group members, for review and comments. Feedback from members is collected by the MQIC project leader and prepared for review by the medical directors' committee at their next scheduled meeting. The review, evaluation, and revision process with several iterations of the guideline may be repeated over several meetings before consensus is reached on a final draft guideline.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

External Peer Review
Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

When consensus is reached on the final draft guideline, the medical directors approve the guideline for external distribution to practitioners with review and comments requested via the Michigan Quality Improvement Consortium (MQIC) health plans (project leader distributes final draft to medical directors' committee, measurement and implementation groups to solicit feedback).

The MQIC project leader also forwards the approved guideline draft to appropriate state medical specialty societies for their input. After all feedback is received from external reviews, it is presented for discussion at the next scheduled committee meeting. Based on feedback, subsequent guideline review, evaluation, and revision may be required prior to final guideline approval.

The MQIC Medical Directors approved this updated guideline in August 2007.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

The level of evidence grades (A-D) are provided for the most significant recommendations and are defined at the end of the "Major Recommendations" field.

Age > 18 Years and Older

Risk Assessment

- Screening: Initial fasting lipid profile (i.e., total, low-density lipoprotein cholesterol [LDL-C], high-density lipoprotein cholesterol [HDL-C], triglycerides); if normal repeat at least every five years **[D]**
- Treatment is based on LDL-C, major risk factors, and presence of coronary heart disease (CHD) or equivalent.

Major Risk Factors

- Cigarette smoking
- Hypertension (blood pressure [BP] $\geq 140/90$)
- 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-C > 100

Risk Stratification

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

Categorical Risk	Goal for LDL-C
CHD or CHD risk equivalents	< 100 mg/dL

Categorical Risk	Goal for LDL-C
10-year risk: >20%	
2+ risk factors 10-year risk: ≤20%	<130 mg/dL
0-1 risk factor	<160 mg/dL

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 to 8 weeks after TLC has 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 to 8 week intervals.
- For patients who do not reach LDL-C goal, consider referral to lipid specialist.

Definitions:

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

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of evidence is provided for the most significant recommendations (See "Major Recommendations" field).

The guideline is based on several sources including, Lipid Management in Adults, Institute for Clinical Systems Improvement, 2006 (www.icsi.org).

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Through a collaborative approach to developing and implementing common clinical practice guidelines and performance measures for hyperlipidemia, Michigan health plans will achieve consistent delivery of evidence-based services and better health outcomes. This approach also will augment the practice environment for physicians by reducing the administrative burdens imposed by compliance with diverse health plan guidelines and associated requirements.

POTENTIAL HARMS

Not stated

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

This guideline lists core management steps. Individual patient considerations and advances in medical science may supersede or modify these recommendations.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

Approved Michigan Quality Improvement Consortium (MQIC) guidelines are disseminated through email, U.S. mail, and websites.

The MQIC project leader prepares approved guidelines for distribution. Portable Document Format (PDF) versions of the guidelines are used for distribution.

The MQIC project leader distributes approved guidelines to MQIC membership via email.

The MQIC project leader submits request to website vendor to post approved guidelines to MQIC website (www.mqic.org).

The MQIC project leader completes a statewide mailing of the comprehensive set of approved guidelines and educational tools annually. The guidelines and tools are distributed in February of each year to physicians in the following medical specialties:

- Family Practice
- General Practice
- Internal Medicine
- Other Specialists for which the guideline is applicable (e.g. endocrinologists, allergists, pediatricians, cardiologists, etc.)

The statewide mailing list is derived from the Blue Cross Blue Shield of Michigan (BCBSM) provider database. Approximately 95% of the state's M.D.'s and 96% of the state's D.O.'s are included in the database.

The MQIC project leader submits request to the National Guideline Clearinghouse (NGC) to post approved guidelines to NGC website (www.guideline.gov).

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better
Living with Illness
Staying Healthy

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

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ADAPTATION

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DATE RELEASED

2003 Aug (revised 2007 Aug)

GUIDELINE DEVELOPER(S)

Michigan Quality Improvement Consortium - Professional Association

SOURCE(S) OF FUNDING

Michigan Quality Improvement Consortium

GUIDELINE COMMITTEE

Michigan Quality Improvement Consortium Medical Director's Committee

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Physician representatives from participating Michigan Quality Improvement Consortium health plans, Michigan State Medical Society, Michigan Osteopathic Association, Michigan Association of Health Plans, Michigan Department of Community Health and Michigan Peer Review Organization

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Standard disclosure is requested from all individuals participating in the Michigan Quality Improvement Consortium (MQIC) guideline development process, including those parties who are solicited for guideline feedback (e.g. health plans, medical specialty societies). Additionally, members of the MQIC Medical Directors' Committee are asked to disclose all commercial relationships.

GUIDELINE STATUS

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GUIDELINE AVAILABILITY

Electronic copies: Available in Portable Document Format (PDF) from the [Michigan Quality Improvement Consortium Web site](#).

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

None available

NGC STATUS

This NGC summary was completed by ECRI on April 14, 2004. The information was verified by the guideline developer on July 27, 2004. This NGC summary was update by ECRI on November 28, 2005. The updated information was verified by the guideline developer on December 19, 2005. This NGC summary was updated by ECRI Institute on March 4, 2008. The updated information was verified by the guideline developer on March 12, 2008.

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