Managing Cholesterol and Pursuing a Healthier Lifestyle
September 23, 2015
1:00pm - 2:00pm CT
Welcome & Introductions

Million Hearts®

Description of the ABCS

John M. Clymer, Executive Director
National Forum for Heart Disease & Stroke Prevention
Co-chair Million Hearts® Collaboration
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:00 – 1:05pm</td>
<td>Welcome and Introductions</td>
<td>John M. Clymer, Executive Director&lt;br&gt;National Forum for Heart Disease &amp; Stroke Prevention</td>
</tr>
<tr>
<td>1:05 – 1:10pm</td>
<td>Million Hearts® and Cholesterol</td>
<td>John M. Clymer, Executive Director&lt;br&gt;National Forum for Heart Disease &amp; Stroke Prevention</td>
</tr>
<tr>
<td>1:10 – 1:22pm</td>
<td>Improving Cholesterol Management and Control</td>
<td>Jennifer G. Robinson, MD, MPH, FAHA&lt;br&gt;Professor, Departments of Epidemiology &amp; Medicine&lt;br&gt;Director, Prevention Intervention Center&lt;br&gt;University of Iowa, College of Public Health</td>
</tr>
<tr>
<td>1:22 – 1:34pm</td>
<td>Public Health Role in Cholesterol Awareness</td>
<td>Eduardo Sanchez, M.D., M.P.H.&lt;br&gt;Chief Medical Officer for Prevention&lt;br&gt;American Heart Association</td>
</tr>
<tr>
<td>1:34 – 1:39pm</td>
<td>Review of Cholesterol Tools and Resources</td>
<td>April Wallace, MHA, Program Manager&lt;br&gt;Million Hearts® Collaboration&lt;br&gt;American Heart Association</td>
</tr>
<tr>
<td>1:39 – 1:55pm</td>
<td>Q and A</td>
<td>John M. Clymer, Executive Director&lt;br&gt;National Forum for Heart Disease &amp; Stroke Prevention</td>
</tr>
<tr>
<td>1:55 – 2:00pm</td>
<td>Final Remarks</td>
<td>John M. Clymer, Executive Director&lt;br&gt;National Forum for Heart Disease &amp; Stroke Prevention</td>
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</tbody>
</table>
Million Hearts®

Goal: Prevent 1 million heart attacks and strokes by 2017

- US Department of Health and Human Services initiative, co-led by:
  - Centers for Disease Control and Prevention (CDC)
  - Centers for Medicare & Medicaid Services (CMS)
- Partners across federal and state agencies and private organizations
Key Components of Million Hearts®

Keeping Us Healthy
Changing the environment

Excelling in the ABCS
Optimizing care

Focus on the ABCS

Health tools and technology

Innovations in care delivery

The ABCS to Prevent Heart Attacks and Strokes

<table>
<thead>
<tr>
<th><strong>A</strong>spirin</th>
<th>People who have had a heart attack and stroke who are taking aspirin</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>B</strong>lood pressure</td>
<td>People with hypertension who have adequately controlled blood pressure</td>
</tr>
<tr>
<td><strong>C</strong>holesterol</td>
<td>People with high cholesterol who are effectively managed</td>
</tr>
<tr>
<td><strong>S</strong>moking</td>
<td>People trying to quit smoking who get help</td>
</tr>
</tbody>
</table>

Sources: National Ambulatory Medical Care Survey, National Health and Nutrition Examination Survey
# Getting to Goal

<table>
<thead>
<tr>
<th>Intervention</th>
<th>2009-2010 Measure Value</th>
<th>2017 Target</th>
<th>Clinical target</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A</strong> Aspirin for those at risk</td>
<td>54%</td>
<td>65%</td>
<td>70%</td>
</tr>
<tr>
<td><strong>B</strong> Blood pressure control</td>
<td>52%</td>
<td>65%</td>
<td>70%</td>
</tr>
<tr>
<td><strong>C</strong> Cholesterol management</td>
<td>33%</td>
<td>65%</td>
<td>70%</td>
</tr>
<tr>
<td><strong>S</strong> Smoking cessation</td>
<td>22%</td>
<td>65%</td>
<td>70%</td>
</tr>
<tr>
<td>Smoking prevalence</td>
<td>26%</td>
<td>10% reduction (~24%)</td>
<td></td>
</tr>
<tr>
<td>Sodium reduction</td>
<td>3580 mg/day</td>
<td>20% reduction (~2900 mg/day)</td>
<td></td>
</tr>
<tr>
<td>Trans fat reduction (artificial)</td>
<td>0.6% of calories</td>
<td>100% reduction (0% of calories)</td>
<td></td>
</tr>
</tbody>
</table>

Sources: National Ambulatory Medical Care Survey, National Health and Nutrition Examination Survey, National Survey of Drug Use and Health
## Clinical Quality Measures

<table>
<thead>
<tr>
<th>ABCS</th>
<th>Number</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>PQRS 204NQF 0068</td>
<td>Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antithrombotic Percentage of patients aged 18 years and older with Ischemic Vascular Disease (IVD) with documented use of aspirin or other antithrombotic</td>
</tr>
<tr>
<td>B</td>
<td>PQRS 317</td>
<td>Preventive Care and Screening: Screening for High Blood Pressure Percentage of patients aged 18 and older who are screened for high blood pressure</td>
</tr>
<tr>
<td>B</td>
<td>PQRS 236NQF 0018</td>
<td>Hypertension: Controlling High Blood Pressure Percentage of patients aged 18 through 85 years of age who had a diagnosis of hypertension (HTN) and whose blood pressure (BP) was adequately controlled (&lt;140/90) during the measurement year</td>
</tr>
<tr>
<td>C (EHR)</td>
<td>PQRS 316</td>
<td>Preventive Care and Screening: Cholesterol– Fasting Low Density Lipoprotein (LDL) Test Performed AND Risk-Stratified Fasting LDL Percentage of patients aged 20 through 79 years whose risk factors have been assessed and a fasting LDL test has been performed AND who had a fasting LDL test performed and whose risk-stratified fasting LDL is at or below the recommended LDL goal</td>
</tr>
</tbody>
</table>

PQRS = CMS Physician Quality Reporting System, NQF = National Quality Forum, EHR = electronic health record
### Clinical Quality Measures (cont’d)

<table>
<thead>
<tr>
<th>ABCS</th>
<th>Number</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>C</strong> (No EHR)</td>
<td>PQRS #2 NQF #0064</td>
<td>Diabetes Mellitus: Low Density Lipoprotein (LDL-C) Control in Diabetes Mellitus Percentage of patients aged 18 through 75 years with diabetes mellitus who had most recent LDL-C level in control (less than 100 mg/dL)</td>
</tr>
<tr>
<td><strong>C</strong> (No EHR)</td>
<td>PQRS #241 NQF #0075</td>
<td>PQRS Measure #241 (NQF 0075): Ischemic Vascular Disease (IVD): Complete Lipid Panel and Low Density Lipoprotein (LDL-C) Control Percentage of patients aged 18 years and older with Ischemic Vascular Disease (IVD) who received at least one lipid profile within 12 months and who had most recent LDL-C level in control (less than 100 mg/dL)</td>
</tr>
<tr>
<td><strong>S</strong></td>
<td>PQRS 226 NQF 0028</td>
<td>Preventive Care and Screening: Tobacco Use: Screening and Cessation Intervention Percentage of patients aged 18 years or older who were screened about tobacco use one or more times within 24 months AND who received cessation counseling intervention if identified as a tobacco user</td>
</tr>
</tbody>
</table>

PQRS = CMS Physician Quality Reporting System, NQF = National Quality Forum, EHR = electronic health record
Join Us

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Be One in a Million Hearts®

millionhearts.hhs.gov
Improving Cholesterol Management and Control

Jennifer G. Robinson, MD, MPH, FAHA
Professor, Co-Director
Prevention Intervention Center
University of Iowa, College of Public Health
Disclosures

Vice-Chair, 2013 ACC/AHA Cholesterol Guideline
Member, 2013 ACC/AHA Risk Assessment Guideline

Received in the past year:
Research grants to the institution: Amarin, Amgen, Astra-Zeneca, Daiichi-Sankyo, Genetech/Hoffman LaRoche, Glaxo-Smith Kline, Merck, Regeneron/Sanofi, Zinfandel/Takeda

Consultant: Amgen, Hoffman LaRoche, Lilly, Merck, Pfizer, Regeneron/Sanofi
Conceptualizing interventions to reduce ASCVD risk

Atherosclerotic Cardiovascular Disease Progression Through the Lifespan

CVD EVENTS
- MI/Unstable angina
- Ischemic stroke/TIA
- Critical leg ischemia
- Intermittent claudication
- CV death

Atherosclerosis progression
2013 ACC/AHA Guideline on the Treatment of Blood Cholesterol to Reduce Atherosclerotic Cardiovascular Risk in Adults

A Report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines

Endorsed by the American Academy of Physician Assistants, American Association of Cardiovascular and Pulmonary Rehabilitation, American Pharmacists Association, American Society for Preventive Cardiology, Association of Black Cardiologists, Preventive Cardiovascular Nurses Association, and WomenHeart: The National Coalition for Women With Heart Disease

Expert Panel Members

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Jennifer G. Robinson, MD, MPH, FAHA, Vice Chair
Alice H. Lichtenstein, DSc, FAHA, Vice Chair
C. Noel Bairey Merz, MD, FAHA, FACC
Conrad B. Blum, MD, FAHA
Robert H. Eckel, MD, FAHA
Anne C. Goldberg, MD, FACP, FAHA
David Gordon, MD

Daniel Levy, MD*
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Karol Watson, MD, PhD, FACC, FAHA
Peter W. F. Wilson, MD, FAHA

*Ex-Officio Members.

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Win-Kuang Shen, MD, FACC, FAHA

Subcommittee on Prevention Guidelines

Sidney C. Smith, Jr, MD, FACC, FAHA, Chair

Gordon F. Tomaselli, MD, FACC, FAHA, Co-Chair
2013 ACC/AHA Guideline on the Assessment of Cardiovascular Risk

A Report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines
2013 ACC/AHA Cholesterol Guideline to Reduce ASCVD Risk

Major recommendations for *initiating* statin therapy based on patient’s level of RISK

Heart healthy lifestyle habits are the foundation of ASCVD prevention
(See 2013 AHA/ACC Lifestyle Management Guideline)

Adults age >21 y and a candidate for statin therapy

Clinical ASCVD

 LDL–C ≥190 mg/dL

Diabetes
Type 1 or 2
Age 40-75 y

Age ≤75 y
High-intensity statin
(Moderate-intensity statin if not candidate for high-intensity statin)

Age >75 y OR if not candidate for high-intensity statin
Moderate-intensity statin

High-intensity statin
(Moderate-intensity statin if not candidate for high-intensity statin)

Moderate-intensity statin

Estimated 10-y ASCVD risk ≥7.5%
High-intensity statin

2013 ACC/AHA Cholesterol Guideline to Reduce ASCVD Risk

Major recommendations for initiating statin therapy based on patient’s level of RISK (cont)

- DM age <40 or >75 y
- Primary prevention (No diabetes, LDL–C 70-189 mg/dL, and not receiving statin therapy)
  - Estimate 10-y ASCVD Risk every 4-6 years
  - Pooled Cohort Equations
  - In selected individuals, additional factors may be considered to inform treatment decision making

- <5% 10-y ASCVD risk
- Age <40 or >75 y and LDL–C <190 mg/dL

- ≥7.5% 10-y ASCVD risk (Moderate- or high-intensity statin)
- 5%-7.5% 10-y ASCVD risk (Moderate-intensity statin)

Clinician-Patient Discussion
Prior to initiating statin therapy, discuss:
1. Potential for ASCVD risk reduction benefit
2. If decision is unclear, consider primary LDL–C ≥160 mg/dL, family history of premature ASCVD, lifetime ASCVD risk, abnormal CAC score or ABI, or hs-CRP ≥2 mg/L
3. Potential for adverse effects and drug-drug interactions
4. Healthy lifestyle
5. Management of other risk factors
6. Patient preferences

Emphasize adherence to lifestyle
Manage other risk factors
Monitor adherence

Encourage adherence to lifestyle
Initiate statin at appropriate intensity
Manage other risk factors
Monitor adherence (See Fig 5)

New Perspective LDL–C & Non-HDL–C Goals

1. No RCT evidence to support titration of drug therapy to specific LDL–C and/or non-HDL–C goals/thresholds

2. Need to know net benefit from treat-to-target strategy
   - Harmful nonstatins: Torcetrapib, HPS2-THRIVE (niacin/laropiprant), WHI (Estrogen+Progestin, Estrogen)
   - Both are above goal: LDL-C 120→69 mg/dl (33% RRR) vs 75→69 mg/dl (3% RRR)

3. Treat-to-target may result in suboptimal evidence-based statin therapy or increased risk of adverse events
   - LDL-C at goal on pravastatin 10 mg (<25% LDL-C lowering)
   - No statin in a patient with LDL-C 90 mg/dl & diabetes or multiple risk factors
   - Safety concerns: Reduce dose of atorvastatin from 80 to 20 mg to add niacin 2 g or fenofibrate
Nonstatins shown to reduce ASCVD events in RCTs preferred.

Regularly measure lipid panel.

Assess medication and lifestyle adherence. Fasting lipid panel.

Anticipated therapeutic response?

Yes

Reinforce continued adherence. Follow-up 3-12 mo.

Anticipated therapeutic response?

Yes

Reinforce improved adherence. Increase statin intensity. OR Consider addition of nonstatin drug therapy.

Follow-up 4-12 wk & thereafter as indicated.

Nonstatins shown to reduce ASCVD events in RCTs preferred.

High intensity statin ≥50% ↓LDL-C

Mod intensity statin 30-<50% ↓LDL-C

If baseline LDL-C unknown, may use LDL-C <100 mg/dl.

Management of statin intolerance (Table 8, Rec 8).

If baseline LDL-C unknown, may use LDL-C <100 mg/dl.

Reinforce medication adherence.

Reinforce adherence to intensive lifestyle changes. Exclude secondary causes of hypercholesterolemia (Table 6).

Follow-up 4-12 wk.

Indicators of anticipated therapeutic response and adherence to selected statin therapy:
- High-intensity statin therapy reduces LDL-C approx. ≥50% from the untreated baseline.
- Moderate-intensity statin therapy reduces LDL-C approx. 30% to <50% from the untreated baseline.

Indicators of anticipated therapeutic response and adherence to selected statin therapy:
- High-intensity statin therapy reduces LDL-C approx. ≥50% from the untreated baseline.
- Moderate-intensity statin therapy reduces LDL-C approx. 30% to <50% from the untreated baseline.
Testing the new paradigm: 2013 ACC/AHA cholesterol guideline outperforms NCEP ATP 3
LDL-C cut-points are the main problem with ATP3

✓ 2013 ACC/AHA - Will prevent more CVD events
  • Dallas Heart Study – identified more high risk patients
  • U.S. NHANES – would prevent 450,000 more ASCVD events/10 years
  • Cost-effective

✓ Why? No correlation LDL-C levels with plaque (CTA or CAC)
  • Removing LDL-C cut-points improves accuracy NCEP ATP 3

Reducing ≥50% LDL-C prevents more ASCVD events than achieved LDL-C <70 mg/dl

TNT-IDEAL-SPARCL Pooled Analysis

Patients with LDL-C <70 mg/dl

HR 1.51 (1.16-1.97)

\[ p=0.002 \]

% LDL-C reduction of <50%

% LDL-C reduction of ≥50%

<table>
<thead>
<tr>
<th>No. at Risk</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>%LDL-C ≥ 50%</td>
<td>4538</td>
<td>4426</td>
<td>4298</td>
<td>4188</td>
<td>4048</td>
<td>1937</td>
<td>71</td>
</tr>
<tr>
<td>%LDL-C &lt;50%</td>
<td>494</td>
<td>475</td>
<td>456</td>
<td>439</td>
<td>419</td>
<td>170</td>
<td>9</td>
</tr>
</tbody>
</table>

2013 ACC/AHA cholesterol guideline framework
1. Maximize statin therapy
2. Add nonstatin in high risk patients
   - Statin intolerant or less than high intensity statin
   - To achieve ≥50% LDL-C reduction

Percent Reductions LDL-C Moderate & High Intensity Statins
Waterfall plots of percent LDL-C reduction

ASCVD Risk Estimator – Primary prevention with or without diabetes

Search “ASCVD Risk Estimator”
ASCVD Risk Estimator
Search “ASCVD risk estimator”

<table>
<thead>
<tr>
<th>Estimator</th>
<th>Clinicians</th>
<th>Patients</th>
<th>About</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASCVD Risk Estimator*</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 10-Year ASCVD Risk

- Calculated risk: 7.7%
- Risk with optimal risk factors: 1.8%

### Lifetime ASCVD Risk

- Calculated risk: 39%
- Risk with optimal risk factors: 8%

### Input Fields

- **Gender**: Male | Female
- **Age**: 55
- **HDL Cholesterol (mg/dL)**: 56
- **Total Cholesterol (mg/dL)**: 210
- **Diabetes**: Yes | No
- **Treatment for Hypertension**: Yes | No
- **Systolic Blood Pressure**: 145
- **Smoker**: Yes | No
- **Race**: White | African American | Other

### Recommendation

- **Recommendation Based On Calculation**
Use ACC/AHA ASCVD risk prediction equations for primary prevention

In U.S. – use 2013 Pooled Cohort Equations include CHD & stroke by race/sex
  • Include CHD & stroke by race/sex
  • Better identifies at-risk Black M & W and white W at much younger ages and lower risk factor levels than ATP 3

• Pooled Cohort Equations validated in REGARDS
  • US population-based study 30,000 randomly selected white & black participants
  • Very good discrimination/calibration

• May overestimate risk in low-risk cohorts
  o High education/SES & clinical trial volunteers, Chinese/East Asians, Mexican Americans
  o Inform Clinician-Patient Discussion

Treatment gaps

• Clinical ASCVD
  - 42-52% women/35-43% men not on a statin
  - White - 42% not on a statin
  - African American -59% not on a statin
  - Hispanic - 67% not on a statin

• Genetic hypercholesterolemia – LDL-C >190 mg/dl
  - >80% with FH are undiagnosed/untreated

• Diabetes age 40-75 years
  - 48-51% are not on statin

Public Health Role in Cholesterol Awareness

Eduardo Sanchez, M.D., M.P.H., FAAP
Chief Medical Officer for Prevention
American Heart Association
The concept of cardiovascular health

- An expanded focus on promotion of positive cardiovascular health as well as CVD prevention and treatment of established CVD.
- The prioritization of health behaviors (no smoking, healthy diet pattern, adequate physical activity and health factors (BMI, optimal blood pressure, blood lipids, glucose levels) as primary goals unto themselves.
- Population-level health promotion strategies to shift the majority of the public toward better cardiovascular health, in addition to targeting those individuals at greatest CVD risk, because CVD risk is not proportionately distributed or addressed accordingly.

AHA 2015 Statistical Update
The current evidence supports a range of complementary strategies to improve cardiovascular health, including:

- Individual-focused approaches, which target lifestyle and treatments at the individual level
- Healthcare systems approaches, which encourage, facilitate, and reward efforts by providers to improve health behaviors and health factors
- Population approaches, which target lifestyle and treatments in schools or workplaces, local communities, and states, as well as throughout the nation

AHA 2015 Statistical Update
### Cardiovascular Health Status Levels

<table>
<thead>
<tr>
<th>LIFE’S SIMPLE 7</th>
<th>POOR</th>
<th>INTERMEDIATE</th>
<th>IDEAL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Smoking Status</strong></td>
<td>Current Smoker &lt;br&gt;Tried prior 30 days</td>
<td>Former ≤ 12 mos &lt;br&gt;Never /quit ≥ 12 mos</td>
<td></td>
</tr>
<tr>
<td>Adults &gt;20 years of age</td>
<td>Children (12–19)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Physical Activity</strong></td>
<td>None &lt;br&gt;1-149 min/wk mod or 1-149 min/wk mod + vig</td>
<td>150+ min/wk mod or 75+ min/wk vig or 150+ min/wk mod + vig</td>
<td>&gt;0 and &lt;60 min of mod or vig &lt;br&gt;every day &lt;br&gt;60+ min of mod or vig every day</td>
</tr>
<tr>
<td>Adults &gt; 20 years of age</td>
<td>Children 12-19 years of age</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Healthy Diet</strong></td>
<td>0-1 components &lt;br&gt;0-1 components</td>
<td>2-3 components &lt;br&gt;2-3 components</td>
<td>4-5 components &lt;br&gt;4-5 components</td>
</tr>
<tr>
<td>Adults &gt;20 years of age</td>
<td>Children 5-19 years of age</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Healthy Weight</strong></td>
<td>≥30 kg/m² &lt;br&gt;≥ 95th percentile</td>
<td>25-29.9 kg/m² &lt;br&gt;85th-95th percentile</td>
<td>&lt;25 kg/m² &lt;br&gt;&lt;85th percentile</td>
</tr>
<tr>
<td>Adults &gt; 20 years of age</td>
<td>Children 2-19 years of age</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Blood Glucose</strong></td>
<td>126 mg/dL or more &lt;br&gt;126 mg/dL or more</td>
<td>100-125 mg/dL or treated to goal &lt;br&gt;170-199 mg/dL</td>
<td>Less than 100 mg/dL &lt;br&gt;Less than 100 mg/dL</td>
</tr>
<tr>
<td>Adults &gt;20 years of age</td>
<td>Children 12-19 years of age</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cholesterol</strong></td>
<td>≥240 mg/dL &lt;br&gt;≥200 mg/dL</td>
<td>200-239 mg/dL or treated to goal &lt;br&gt;170-199 mg/dL</td>
<td>&lt;170 mg/dL</td>
</tr>
<tr>
<td>Adults &gt;20 years of age</td>
<td>Children 6-19 years of age</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Blood Pressure</strong></td>
<td>SBP ≥140 or DBP ≥90 mm Hg</td>
<td>SBP120-139 or DBP 80-89 mm Hg or treated to goal</td>
<td>&lt;120/&lt;80 mm Hg</td>
</tr>
<tr>
<td>Adults &gt;20 years of age</td>
<td>Children 8-19 years of age</td>
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</tbody>
</table>
Prevalence (unadjusted) estimates of poor, intermediate, and ideal cardiovascular health for each of the 7 metrics of cardiovascular health in the American Heart Association 2020 goals among US adults aged 20 to 49 years and ≥50 years, National Health and Nutrition Examination Survey (NHANES) 2011 to 2012. *Healthy diet score data reflects 2009 to 2010 NHANES data.

Dariush Mozaffarian et al. Circulation. 2015;131:e29-e322

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• **46.6% of adults have ideal cholesterol levels** (untreated total cholesterol <200 mg/dL for adults). Prevalence of ideal levels has remained the same in adults over the past decade.

• According to 2009 to 2012 data,
  – More than 100 million US adults (≥20 years of age) have total cholesterol levels ≥200 mg/dL – about one-in-three;
  – almost 31 million have levels ≥240 mg/dL with a prevalence of 13.1%

AHA 2015 Statistical Update
US Preventive Services Task Force
Cholesterol Screening Recommendations

• Men 35 and Older: strongly recommends screening men aged 35 and older for lipid disorders. A recommendation.
• Men 20-35 at Increased Risk for CHD: recommends screening men aged 20-35 for lipid disorders if they are at increased risk for coronary heart disease. B recommendation.
• Women 45 and Older at Increased Risk for CHD: strongly recommends screening women aged 45 and older for lipid disorders if they are at increased risk for coronary heart disease. B recommendation.
• Women 20-45 at Increased Risk for CHD: recommends screening women aged 20-45 for lipid disorders if they are at increased risk for coronary heart disease. B recommendation.

• In Progress
  – Lipid disorders in Adults: Screening– release in 2015

A - There is high certainty that the net benefit is substantial.
B - There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial.
US Preventive Services Task Force
Cholesterol Screening Recommendations

• The optimal interval for screening is uncertain.
• On the basis of other guidelines and expert opinion:
  – reasonable options include every 5 years,
  – shorter intervals for people who have lipid levels close to those warranting therapy,
  – and longer intervals for those not at increased risk who have had repeatedly normal lipid levels.

Dariush Mozaffarian et al. Circulation. 2015;131:e29-e322
Summary of Statin Initiation Recommendations for the Treatment of Blood Cholesterol to Reduce ASCVD Risk in Adults (See Figures 3, 4, and 5 for More Detailed Management Information).

Initiating Statin Therapy in Individuals With Clinical ASCVD. Colors correspond to the Classes of Recommendation in Table 1. *Fasting lipid panel preferred.

Clinical ASCVD
Not currently on statin therapy
Initial evaluation prior to statin initiation
- Fasting lipid panel*
- ALT
- CK (if indicated)
- Consider evaluation for other secondary causes (Table 6) or conditions that may influence statin safety (Table 8, Rec 1).

Evaluate and Treat Laboratory Abnormalities
1. Triglycerides ≥500 mg/dL
2. LDL-C ≥190 mg/dL
   - Secondary causes (Table 6)
   - If primary, screen family for FH
3. Unexplained ALT ≥3 times ULN

Age ≤75 y without contraindications, conditions or drug–drug interactions influencing statin safety, or a history of statin intolerance
- Initiate high-intensity statin therapy
  - Counsel on healthy-lifestyle habits

Age >75 y†
OR
with conditions or drug–drug interactions influencing statin safety, or a history of statin intolerance
- Initiate moderate-intensity statin therapy
  - Counsel on healthy-lifestyle habits

Monitor statin therapy (Figure 5)

Initiating Statin Therapy in Individuals Without Clinical ASCVD. Colors correspond to the Classes of Recommendation in Table 1. *Fasting lipid panel preferred.


David C. Goff, Jr et al. Circulation. 2014;129:S49-S73
High Blood Cholesterol – What to do

• Focus on promotion of positive cardiovascular health as well as CVD prevention and treatment of established high cholesterol.

• Health behavior and health factor optimization should be emphasized
  - No smoking
  - Healthy eating
  - Adequate physical activity
  - Healthy BMI
  - Blood pressure
  - Cholesterol
  - Blood glucose

• Encourage discussions with personal physician to determine 10-year risk using AHA/ACC ASCVD risk estimator
My Life Check™-Life’s Simple 7 and Heart360

Patient Education and Self-Management

The My Life Check™ assessment is integrated with Heart360.org

- Offers an easy-to-use provider portal where healthcare providers can directly connect with their patients to monitor and assist them to improve their health.
Cholesterol Guide

Interactive Cholesterol Guide

Find videos, quizzes, trackers and more with our interactive cholesterol guide. You’ll learn about risk factors, treatment and measurement of cholesterol, along with helpful tips for daily living.
ASCVD Risk Estimator

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<th>Male</th>
<th>Female</th>
<th>40</th>
<th>275</th>
<th>130</th>
<th>Yes</th>
<th>No</th>
<th>White</th>
<th>African American</th>
<th>Other</th>
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<tbody>
<tr>
<td>HDL - Cholesterol (mg/dL)</td>
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<td>275</td>
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<tr>
<td>Systolic Blood Pressure</td>
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<tr>
<td>Treatment for Hypertension</td>
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</tr>
</tbody>
</table>

Note: These estimates may underestimate the 10-year and lifetime risk for persons from some race/ethnic groups, especially American Indians, some Asian-Americans (e.g., of south Asian ancestry), and some Hispanics (e.g., Puerto Ricans), and may overestimate the risk for others, including some Asian-Americans (e.g., of east Asian ancestry) and some Hispanics (e.g., Mexican Americans).

Because the primary use of these risk estimates is to facilitate the very important discussion regarding risk reduction through lifestyle change, the impression introduced is small enough to justify proceeding with lifestyle change counseling informed by these results.
AHA Cholesterol Resources for Patients and Providers

2013 ACC/AHA Guideline on the Treatment of Blood Cholesterol to Reduce Atherosclerotic Cardiovascular Risk in Adults.

E-Published on November 12, 2013, available at:

http://circ.ahajournals.org/lookup/doi/10.1161/01.cir.0000437738.63853.7a

Downloadable Toolkit for Providers:

• **Pocket Guide** - Information about guidelines for treating patients with high cholesterol
• **Referral Pad** - Instructs patients on how to sign up for Heart360
• **Waiting Room Poster** - Encourages enrollment in Heart360
• **Quick Start Guide** - Shows you how to enroll in Heart360
Other Educational Materials

**Cholesterol and Other Educational Brochures**
Find links to cholesterol and other American Heart Association brochures.
http://http://www.heart.org/HEARTORG/Conditions/Cholesterol

**Downloadable Sheets**
- Cholesterol Questions To Ask Your Doctor (PDF)
- What Are High Blood Cholesterol and Triglycerides? (PDF)
- How Can I Lower High Cholesterol? (PDF)
- What Is Cholesterol-Lowering Medicine? (PDF)
- How Can I Monitor My Cholesterol, Blood Pressure and Weight? (PDF)
- Downloadable Medicine Chart (PDF)
Other Educational Materials

**Cholesterol Personal Stories**
Real patients share their experience and describe how they learned to live healthy and lower cholesterol.

**Recipes**
Discover how easy it is to avoid excess saturated and *trans* fat while enjoying mouth-watering dishes.

**Healthy Living Resource Guide for All Seniors**
Any person of any age can make healthy changes. Our Resource Guide and exercise infographic will help you make smart choices as you and your loved ones look to maintain health and wellness.
Questions about managing cholesterol?

http://www.heart.org/Cholesterol
Our support platform is dedicated to serving those who have experienced heart disease or stroke and their caregivers.

It is designed for individuals, their families and caregivers to meet others, share their stories, and to find and give support.

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For more information on cholesterol management, visit:

http://www.heart.org/Cholesterol
Q & A

John M. Clymer, Executive Director
National Forum for Heart Disease & Stroke Prevention
Co-chair Million Hearts® Collaboration
Closing Remarks

John M. Clymer, Executive Director
National Forum for Heart Disease & Stroke Prevention
Co-chair Million Hearts® Collaboration
Thank You!

For more information, please visit the CDC’s Million Hearts® website at: millionhearts.hhs.gov
or
the AHA’s Million Hearts® webpage at: http://www.heart.org/HEARTORG/Advocate/American-Heart-Association-Million-Hearts_UCM_463392_Article.jsp