Reducing your Risk of Heart Disease
Webinar Series

Following your Treatment Plan to Reduce your Risk of a Second Event

Part 2
April 18, 2019
Presenters

• Andrea Baer, MS, BCPA – Director of Patient Advocacy and Program Management, Mended Hearts and Mended Little Hearts. Andrea is also a mom to a 10 year old son with Congenital Heart Disease.

• Dr. Seth Martin - a core faculty member with the Ciccarone Center for the Prevention of Cardiovascular Disease and Director of the Advanced Lipid Disorders Center. Dr. Martin also serves as an Associate Faculty member in the Welch Center for Prevention, Epidemiology, and Clinical Research and an Affiliate Faculty in the Malone Center for Engineering in Healthcare.

• Patrick Farrant – Vice-President of Mended Hearts, Executive Vice-President Elect for Mended Hearts. Patrick has served as local chapter treasurer, vice president and president. Nationally, he has served as Assistant Regional Director for the Western Region. He has also served two terms as Regional Director for the Western Region and is serving his second term as National Vice President.
About Mended Hearts

• Mended Hearts is the largest peer-to-peer support network in the world.

• Mended Hearts mission is:
  “To inspire hope and improve the quality of life of heart patients and their families through on-going peer-to-peer support, education, and advocacy”.

• 285 Chapters across the country serving over 460 hospitals.
About the ASPC

• The American Society for Preventive Cardiology mission statement is: “To promote the prevention of cardiovascular disease, advocate for the preservation of cardiovascular health, and disseminate high-quality, evidence-based information through the education of healthcare clinicians and their patients”.

Following Your Treatment Plan to Reduce Your Risk of a 2nd Event

Seth S. Martin, MD, MHS, FACC, FAHA, FASPC
Associate Professor of Medicine - Cardiology
Johns Hopkins University School of Medicine
Firm Faculty, Janeway Firm, Osler Medical Residency
Director, Advanced Lipid Disorders Program, Ciccarone Center for the Prevention of Cardiovascular Disease
The ABCDE Approach

A: Antiplatelet/Anticoagulant
B: Blood Pressure
C: Cigarettes/Cholesterol
D: Diabetes Prevention
   Diet/Weight
E: Exercise/Education
Antiplatelet

- Aspirin 81-162 mg/day indefinitely [Class I].
- Clopidogrel, prasugrel, or ticagrelor (i.e., P2Y12 inhibitor) in addition to aspirin after PCI [Class I].
  - If bare-metal stent, P2Y12 inhibitors should be taken for ≥1 month [Class I].
  - If drug-eluting stent, P2Y12 inhibitors for ≥1 year [Class I].
  - If on dual antiplatelet therapy (DAPT), use aspirin 81 mg/day [Class I].
- If no PCI was performed after an ACS event, either clopidogrel or ticagrelor should be used.
- Do not use prasugrel if history of stroke or TIA [Class III]. Caution in those over 70 years of age.
- Aspirin 81 to 325 mg/day or clopidogrel for all patients following a non-cardioembolic ischemic stroke [Class I].
BP Thresholds & Recommendations for Rx & Follow-Up

BP thresholds and recommendations for treatment and follow-up

- **Normal BP** (BP <120/80 mm Hg)
  - Promote optimal lifestyle habits
  - Reassess in 1 y (Class IIa)

- **Elevated BP** (BP 120–129/<80 mm Hg)
  - Nonpharmacologic therapy (Class I)
  - Reassess in 3–6 mo (Class I)

- **Stage 1 hypertension** (BP 130–139/80-89 mm Hg)
  - Nonpharmacologic therapy (Class I)
  - Reassess in 1 mo (Class I)

- **Clinical ASCVD or estimated 10-y CVD risk ≥10%**
  - No
  - Yes
    - Nonpharmacologic therapy and BP-lowering medication† (Class I)

- **Stage 2 hypertension** (BP ≥ 140/90 mm Hg)
  - Nonpharmacologic therapy (Class I)
  - Reassess in 3–6 mo (Class I)

2017 ACC/AHA Hypertension Guidelines
Nonpharmacological Interventions

<table>
<thead>
<tr>
<th>COR</th>
<th>LOE</th>
<th>Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>A</td>
<td>Weight loss recommended to reduce BP in adults with elevated BP who are overweight or obese.</td>
</tr>
<tr>
<td>I</td>
<td>A</td>
<td>A heart-healthy diet, such as the DASH (Dietary Approaches to Stop Hypertension) diet, that facilitates achieving a desirable weight is recommended for adults with elevated BP.</td>
</tr>
<tr>
<td>I</td>
<td>A</td>
<td>Sodium reduction is recommended for adults with elevated BP.</td>
</tr>
<tr>
<td>I</td>
<td>A</td>
<td>Potassium supplementation, preferably in dietary modification, is recommended for adults with elevated BP unless contraindicated by presence of CKD or use of drugs that reduce potassium excretion.</td>
</tr>
</tbody>
</table>

2017 ACC/AHA Hypertension Guidelines
Nonpharmacological Interventions

<table>
<thead>
<tr>
<th>COR</th>
<th>LOE</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>A</td>
<td>Increased physical activity with a structured exercise program is recommended for adults with elevated BP or hypertension.</td>
</tr>
<tr>
<td>I</td>
<td>A</td>
<td>Adult men &amp; women with elevated BP or hypertension who currently consume alcohol should be advised to drink no more than 2 &amp; 1 standard drinks* per day, respectively.</td>
</tr>
</tbody>
</table>

*In U.S., 1 “standard” drink contains roughly 14 g of pure alcohol, which is typically found in 12 oz of regular beer (usually ~5% alcohol), 5 oz of wine (usually ~12% alcohol), & 1.5 oz of distilled spirits (usually ~40% alcohol).
### BP Rx Threshold & Use of CVD Risk Estimation to Guide Drug Rx of Hypertension

<table>
<thead>
<tr>
<th>COR</th>
<th>LOE</th>
<th>Use of BP-lowering meds recommended for secondary prevention of recurrent CVD events in patients with clinical CVD &amp; average SBP $\geq 130$ mm Hg or DBP $\geq 80$ mm Hg, &amp; for primary prevention in adults with an estimated 10-yr ASCVD risk of $\geq 10%$ &amp; an average SBP $\geq 130$ mm Hg or DBP $\geq 80$.</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>SBP: A</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DBP: C-EO</td>
<td></td>
</tr>
</tbody>
</table>
Accurate Measurement of BP in the Office

<table>
<thead>
<tr>
<th>COR</th>
<th>LOE</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>C-E0</td>
<td>For diagnosis and management of high BP, proper methods are recommended for accurate measurement and documentation of BP.</td>
</tr>
</tbody>
</table>

- Step 1: Properly prepare the patient
- Step 2: Use proper technique for BP measurements
- Step 3: Take the proper measurements needed for dx & Rx of elevated BP/hypertension
- Step 4: Properly document accurate BP readings
- Step 5: Average the readings
- Step 6: Provide BP readings to patient

2017 ACC/AHA Hypertension Guidelines
LDL cholesterol and benefit in clinical trials

- LDL-C achieved mg/dL (mmol/L)

**Primary Prevention**
- 4S - Placebo
- 4S - Rx
- LIPID - Placebo
- LIPID - Rx
- HPS - Placebo
- HPS - Rx
- PROVE-IT - PRA
- PROVE-IT - ATV
- TNT - ATP10
- TNT - ATV80
- TNT - ATP60
- CARE - Placebo
- CARE - Rx
- AFCAPS - Placebo
- AFCAPS - Rx
- ASCOT - Placebo
- ASCOT - Rx

**Secondary Prevention**
- WOSCOPS - Placebo
- WOSCOPS - Rx

**Statin therapy**
- Rx - Statin therapy
- PRA - pravastatin
- ATV - atorvastatin

Adapted from Rosensen RS. Exp Opin Emerg Drugs 2004; 9(2):269-279

LDL cholesterol and benefit in clinical trials
Cholesterol Treatment Trialists (CTT) Collaboration

- RCTs of statin Rx
  - ≥ 2 year follow-up
  - ≥ 1,000 patients

- 26 RCTs, 170,000 individuals
- 25,000 major vascular events

- Statin vs. no statin
  - Average LDL-reduction 1 mmol/L (~40 mg/dL)
- High-intensity vs. lower-intensity
  - Average LDL-reduction 0.5 mmol/L (~20 mg/dL)

CTT collaboration. Am J Cardiol 1995;75:1130-34
CTT collaboration. Lancet 2010;376:1670
Collins et al. Lancet 2016;388:2532-61
Proportional yearly risk reduction per mmol/L reduction in LDL-C

<table>
<thead>
<tr>
<th>Total number of MVEs</th>
<th>Annual event rate in control arm (% per year)</th>
<th>RR (CI) per 1 mmol/L reduction in LDL cholesterol</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1 year</td>
<td>4680</td>
<td>3.8</td>
</tr>
<tr>
<td>1-2 years</td>
<td>3580</td>
<td>3.4</td>
</tr>
<tr>
<td>2-3 years</td>
<td>3124</td>
<td>3.6</td>
</tr>
<tr>
<td>3-4 years</td>
<td>2483</td>
<td>3.6</td>
</tr>
<tr>
<td>4-5 years</td>
<td>1819</td>
<td>3.7</td>
</tr>
<tr>
<td>≥5 years</td>
<td>1018</td>
<td>3.9</td>
</tr>
<tr>
<td>All years</td>
<td>16704</td>
<td>3.6</td>
</tr>
<tr>
<td>Years 1≥5</td>
<td>12024</td>
<td>3.6</td>
</tr>
</tbody>
</table>

CTT collaboration. Lancet 2010;376:1670
Collins et al. Lancet 2016;388:2532-61
Clinical ASCVD

Healthy Lifestyle

ASCVD not at very high-risk*

Age ≤75 y
- High-intensity statin (Goal: ↓ LDL-C ≥50%) (Class I)
  - If high-intensity statin not tolerated, use moderate-intensity statin (Class I)
  - If on maximal statin therapy and LDL-C ≥70 mg/dL (≥1.8 mmol/L), adding ezetimibe may be reasonable (Class IIb)

Age >75 y
- Initiation of moderate- or high-intensity statin is reasonable (Class IIa)
- Continuation of high-intensity statin is reasonable (Class IIa)

Very high-risk* ASCVD

High-intensity or maximal statin (Class I)

- If on maximal statin and LDL-C ≥70 mg/dL (≥1.8 mmol/L), adding ezetimibe is reasonable (Class IIa)
- If PCSK9-I is considered, add ezetimibe to maximal statin before adding PCSK9-I (Class I)
- Dashed arrow indicates RCT-supported efficacy, but is less cost effective

If on clinically judged maximal LDL-C lowering therapy and LDL-C ≥70 mg/dL (≥1.8 mmol/L), or non-HDL-C ≥100 mg/dL (≥2.6 mmol/L), adding PCSK9-I is reasonable (Class IIa)

2018 AHA/ACC Cholesterol Guidelines
In patients with clinical ASCVD, reduce low-density lipoprotein cholesterol with high-intensity statin therapy or maximally tolerated statin therapy.

The more LDL-C is reduced on statin therapy, the greater will be subsequent risk reduction.

Use a maximally tolerated statin to lower LDL-C levels by ≥50%.
In very high-risk ASCVD, use a LDL-C threshold of 70 mg/dL to consider addition of nonstatins to statin therapy.

- Very high-risk includes a history of multiple major ASCVD events or 1 major ASCVD event and multiple high-risk conditions.
- In very high-risk ASCVD patients, it is reasonable to add ezetimibe to maximally tolerated statin therapy when the LDL-C level remains ≥70 mg/dL (≥1.8 mmol/L).
- In patients at very high risk whose LDL-C level remains ≥70 mg/dL (≥1.8 mmol/L) on maximally tolerated statin and ezetimibe therapy, adding a PCSK9 inhibitor is reasonable, although the long-term safety (>3 years) is uncertain and cost-effectiveness is low at mid-2018 list prices.
## Recommendations for Implementation

<table>
<thead>
<tr>
<th>COR</th>
<th>LOE</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>A</td>
<td>Interventions focused on improving adherence to prescribed therapy are recommended for management of adults with elevated cholesterol levels, including telephone reminders, calendar reminders, integrated multidisciplinary educational activities, and pharmacist-led interventions, such as simplification of the drug regimen to once-daily dosing.</td>
</tr>
<tr>
<td>I</td>
<td>B-NR</td>
<td>Clinicians, health systems, and health plans should identify patients who are not receiving guideline-directed medical therapy and should facilitate the initiation of appropriate guideline-directed medical therapy, using multifaceted strategies to improve guideline implementation.</td>
</tr>
<tr>
<td>I</td>
<td>B-NR</td>
<td>Before therapy is prescribed, a patient-clinician discussion should take place to promote shared decision-making and should include the potential for ASCVD risk-reduction benefit, adverse effects, drug-drug interactions, and patient preferences.</td>
</tr>
</tbody>
</table>
Patient has T2D* and established clinical ASCVD.

Address concurrently.

Guideline-directed medical therapy (lifestyle, antiplatelet, blood pressure, lipids) and glucose-lowering therapy (metformin).

Consider addition of an SGLT2 inhibitor or GLP-1RA with demonstrated CV outcome benefit.

Initiate clinician-patient discussion.

No additional action taken at this time

SGLT2 inhibitor selected

GLP-1RA selected

*Most trials of SGLT2i and GLP-1RA required baseline A1C ≤ 7% (Example: EXSCEL Trial required HbA1c ≥ 6.5%), and most patients were already on metformin as first-line therapy if tolerated and not contraindicated

Abbreviations: ASCVD = atherosclerotic cardiovascular disease; CV = cardiovascular; GLP-1RA = glucagon-like peptide-1 receptor agonist; SGLT2 = sodium-glucose cotransporter-2; T2D = type 2 diabetes.

Das et al. JACC 2018
AHA Nutrition Committee Dietary Recommendations

• Balance calorie intake & physical activity to achieve healthy weight
• Diet rich in fruits & vegetables, whole-grain, high-fiber foods
• Consume fish > 2 x/ week
• Limit saturated fat to <7% of energy, & cholesterol <300 mg/day by:
  – Choosing lean meat & vegetable alternatives
  – Fat free (skim) or low-fat dairy products,
  – Minimizing partially hydrogenated/trans fats
• Minimize beverages & foods with added sugar
• Choose & prepare foods with little or no salt
• If alcohol is consumed, do so in moderation
• For substantial health benefits, adults should do:
  – at least **150 minutes** (2.5 hours)/week of moderate-intensity aerobic activity
  OR
  – **75 minutes**/week of vigorous-intensity aerobic physical activity
  OR
  – an **equivalent combination** of moderate- & vigorous-intensity aerobic activity.”

• Aerobic activity should be performed
  – in episodes of ≥10 minutes,
  – And preferably should be spread throughout the week.”
My ABCs
Heart health learning & skill building with state-of-art videos and evidence-based articles
Thank you!
Following your Treatment Plan

Patrick Farrant, Vice-President, Mended Hearts
Understanding the “Whys” and “Hows”

- Have open communication with your provider about “why” the treatment is important.
- Understand what the treatment plan is going to accomplish
  - IE: Weight loss, symptom management, risk reduction
- Be an active part of the treatment plan design
- Take ownership of your plan
It’s a lifestyle change
Stay on Track

• Use apps or other reminders
• Build a “new” routine
• Make it fun
• Explore and experiment with different ways to keep yourself on track
• Keep a journal
Get Support from Others
It’s ok to make mistakes
Next Webinar in the Series:

- May 2\textsuperscript{nd} 2019
- 12:00 PM ET
- Blood Pressure Control to Reduce your Risk

Reducing Your Risk of Heart Disease: An Educational Webinar Series

Save the dates and join Mended Hearts and the American Society for Preventive Cardiology for a six-part webinar series to help you reduce your risk of heart disease.

- Tuesday, April 2, 2019 12:00 — 1:00 PM ET: Cholesterol Control and Diet Modifications
- Thursday, April 18, 2019 12:00 — 1:00 PM ET: Following your Treatment Plan to Reduce Your Risk of a Second Event
- Thursday, May 2, 2019 12:00 — 1:00 PM ET: Blood Pressure Control
- Thursday, May 16, 2019 12:00 — 1:00 PM ET: Preventative Exercise and Physical Activity
- Thursday, June 6, 2019 12:00 — 1:00 PM ET: Controlling Risk Factors for Women
- Thursday, June 20, 2019 12:00 — 1:00 PM ET: Controlling Risk Factors for Diverse Populations

For more information and registration, please visit https://mendedhearts.org/risk-reduction-webinar-series/

MH and ASPC gratefully acknowledges the support of Amgen for this webinar series
Thank you to our Sponsor:

AMGEN
Cardiovascular

ASPC
The American Society for Preventive Cardiology

Mended Hearts

www.aspconline.org

www.mendedhearts.org
1-888-HEART-99
Andrea.baer@mendedhearts.org