Statin, Aspirin, and CV Prevention

J. Brian Bronson, MD
Physician Director Outpatient Quality San Diego
Chief of Family Medicine
Approximately how much risk reduction from MI can a patient receive by using Atorvastatin 40mg + aspirin 81mg?

A. <35%
B. 35-40%
C. 40-50%
D. 50-60%
E. >60%
A 61 year old Male with DM and ASCVD risk of 9%. You should:

A. Start Atorvastatin 40mg and Aspirin 81mg

B. Discuss Atorvastatin 20mg and Aspirin 81mg

C. Start Atorvastatin 40mg and discuss Aspirin 81mg

D. Start Atorvastatin 20mg and do not start aspirin

E. Discuss Atorvastatin 40mg and do not start Aspirin.
Statins, Aspirin, and CV Prevention

- Heart attacks and strokes are big drivers of death and disability in the US and in KP.
- Leveraging KP integrated systems for statin and aspirin optimization provides opportunity for reduction in ASCVD events and associated costs.
Top 10 causes of death in high income countries

- Ischaemic heart disease: 158 deaths per 100,000 population
- Stroke: 95 deaths per 100,000 population
- Trachea, bronchus, lung cancer: 49 deaths per 100,000 population
- Alzheimer disease and dementia: 42 deaths per 100,000 population
- COPD: 31 deaths per 100,000 population
- Lower respiratory infections: 31 deaths per 100,000 population
- Colon rectum cancers: 27 deaths per 100,000 population
- Diabetes mellitus: 20 deaths per 100,000 population
- Hypertensive heart disease: 20 deaths per 100,000 population
- Breast cancer: 16 deaths per 100,000 population

For more information, visit: http://www.who.int/mediacentre/factsheets/fs310/en/index1.html
KP SCAL MI trend

overall 2010 US Census age standardized Myocardial Infarction incidence rate per 100,000 py at KP SCAL

1. Internal Unpublished data
The KP San Diego Journey

- ALL program - 2000
  - Aspirin
  - Lisinopril
  - Lovastatin → Simvastatin → Atorvastatin
- Started with PC Education from Jim Dudl
- Tear off sheet Rx with all 3 meds prewritten.
Lifestyle Promotion

- Promote exercise
  - Motivational Interviewing
    - Work in Progress

- Healthy Plate Promotion
  - Quick, impactful intervention
  - Picture helps overcome literacy barriers.
  - Training for all SD Primary Care physicians
Updated Four Statin Benefit Groups

1. Clinical ASCVD, start atorvastatin 40-80 mg
2. LDL >= 190, start atorvastatin 40-80 mg
3. DM age 40-75,

<table>
<thead>
<tr>
<th>A-Risk</th>
<th>ARR</th>
<th>recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;= 7.5</td>
<td>&gt;= 3</td>
<td>Start atorvastatin 40 mg</td>
</tr>
<tr>
<td>&lt; 7.5</td>
<td>&lt; 3</td>
<td>Start atorvastatin 20 mg</td>
</tr>
</tbody>
</table>

4. “4th Statin Benefit Group”,

<table>
<thead>
<tr>
<th>A-Risk</th>
<th>ARR</th>
<th>recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;= 15</td>
<td>&gt;= 4</td>
<td>Start atorvastatin 40 mg</td>
</tr>
<tr>
<td>7.5 - 14.9</td>
<td>3 - 3.9</td>
<td>Discuss atorvastatin 40 mg</td>
</tr>
<tr>
<td>5 - 7.4</td>
<td>2 - 2.9</td>
<td>Consider atorvastatin 20 mg</td>
</tr>
</tbody>
</table>
Statins KPSC as of Oct 2016

% filled statin in the last year

ASCVD

DM

A-Risk 15+

NCQA Field Testing National Average (1)

NCQA Field Testing National Average

NHANES primary prevention (2)

1. NCQA Testing 4/9/15
Modeled Statin and Aspirin Risk Reduction, Primary Prevention. Archimedes ARCHeS

ASCVD relative risk reduction

- Aspirin 81 mg: 17%
- Atorvastatin 40 mg: 42%
- Both: 54%

Dudl, Scott, Chan. AHA poster, Nov 2014
Aspirin to help prevent MI, stroke and Colorectal Cancer!

For adults without ASCVD, with or without diabetes mellitus:

- **Age 50-59 with A-Risk ≥ 10%, start aspirin 81 mg daily.**
  - About 30% of men and 2% of women in NHANES qualify.

- **Age 60-69 with A-Risk ≥ 10%, discuss aspirin 81 mg daily.**
  - 82% men and 30% of women in NHANES qualify.

USPSTF 2016, KP National Guidelines
### Lifetime events in 1,000 women taking aspirin - primary prevention

<table>
<thead>
<tr>
<th>ASCVD Risk</th>
<th>MIs Prevented</th>
<th>Ischemic Strokes Prevented</th>
<th>CRC Cases Prevented</th>
<th>Serious GI Bleeding Caused</th>
<th>Hemorrhagic Strokes Caused</th>
<th>Net Life-Years Gained</th>
<th>Quality-Adjusted Life-Years Gained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ages 50 to 59 years</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10%</td>
<td>14.8</td>
<td>13.7</td>
<td>13.9</td>
<td>20.9</td>
<td>3.5</td>
<td>21.9</td>
<td>62.1</td>
</tr>
<tr>
<td>15%</td>
<td>15.0</td>
<td>14.3</td>
<td>13.5</td>
<td>20.0</td>
<td>3.4</td>
<td>33.4</td>
<td>71.6</td>
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<tr>
<td>20%</td>
<td>15.2</td>
<td>14.4</td>
<td>13.2</td>
<td>18.4</td>
<td>2.9</td>
<td>46.3</td>
<td>83.3</td>
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<tr>
<td><strong>A-Risk &gt;10% → Start aspirin 81 mg daily</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ages 60 to 69 years</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10%</td>
<td>10.1</td>
<td>11.6</td>
<td>10.5</td>
<td>23.0</td>
<td>3.2</td>
<td>-1.2</td>
<td>28.4</td>
</tr>
<tr>
<td>15%</td>
<td>11.0</td>
<td>12.9</td>
<td>9.3</td>
<td>21.6</td>
<td>3.4</td>
<td>1.7</td>
<td>32.4</td>
</tr>
<tr>
<td>20%</td>
<td>11.1</td>
<td>13.0</td>
<td>9.7</td>
<td>21.7</td>
<td>3.3</td>
<td>4.8</td>
<td>36.0</td>
</tr>
<tr>
<td><strong>A-Risk &gt;10% → Discuss aspirin 81 mg daily</strong></td>
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</tbody>
</table>

2016 USPSTF
Promote Statin + Aspirin use and adherence

- Use opportunities:
  - When new diagnosis, (MI, PAD, Diabetes).
  - When communicating lipid panel results (and A-Risk).
- Majority of non-adherent feel “Medicine will do more harm than good”. Explain risk of disease, benefit of treatment.
- Discuss potential barriers to adherence.
- Pillbox “gift” to promote adherence.

Just In Time Information for the Health Care Team

### Encounter Checklist

- **Generated on:** 11/7/2016
- **Name:** [Redacted]
- **MRN:** [Redacted]
- **Age:** [Redacted]
- **DOB:** [Redacted]
- **Gender:** M
- **Day Phone:** (000) 000-0000
- **Evening Phone:** [Redacted]
- **PCP:** BROWN, JOHN BRIAN (M.D.)
- **Address:** [Redacted]
- **Language:** ENGLISH
- **oPAP Last viewed:** 30 Oct 2016 9:44 PM
- **ASCVD Risk Score:** 24.30%
- **Asthma Medication Ratio:** N/A

### Care Gaps

- Missing Current Exercise Vitals
- Update BMI - Take Height AND Weight
- Update Tobacco Use

### Recommendations

<table>
<thead>
<tr>
<th>Care Gaps Due</th>
<th>Actions to Be Taken</th>
</tr>
</thead>
<tbody>
<tr>
<td>Missing Current Exercise Vitals</td>
<td>• Document exercise vitals in exercise vitals section</td>
</tr>
<tr>
<td>Update BMI - Take Height AND Weight</td>
<td>• Update Height AND Weight</td>
</tr>
</tbody>
</table>
| Update Tobacco Use | • Verify and update tobacco use status  
• Stage tobacco counseling v-code and patient instructions |
Just In Time Advice for the Health Care Team

Patient: MATISTA, JOSEPH PAUL (M.D.)
PCP: MATISTA, JOSEPH PAUL (M.D.)
Last BP: 1)10/25/16 (132/64) 2)08/28/16 (133/68)
ASCVD Risk Score: 5.5%

Gender: F
PCP Apt: 10/14/2016
Phone: (000) 000-0000
Language: SPANISH
Last MAM: 02/17/2016
Last PAP: 05/23/2016

Recommended Care
- Start lisinopril (target 10 - 40mg daily).
- DM Age 40-75 AND A-Risk < 7.5%: Start atorvastatin 20mg daily.
- DIABETES: Glucose Rx not optimal/check compliance.
- Discuss aspirin 81mg daily - benefit outweighs risk.

Diseases / Risks
- DM
- HTN
- ASCVD Risk Score
  - CTI 5.5%

Last two lab results
<table>
<thead>
<tr>
<th>Date</th>
<th>Type</th>
<th>Result</th>
<th>Source</th>
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<tbody>
<tr>
<td>08/06/16</td>
<td>A1C</td>
<td>12.2</td>
<td>K</td>
</tr>
<tr>
<td>12/23/14</td>
<td>ALT</td>
<td>97</td>
<td>K</td>
</tr>
<tr>
<td>08/06/16</td>
<td>CR</td>
<td>0.49</td>
<td>K</td>
</tr>
<tr>
<td>08/06/16</td>
<td>GFR</td>
<td>&gt;89</td>
<td>K</td>
</tr>
<tr>
<td>07/29/15</td>
<td>GFR</td>
<td>&gt;89</td>
<td>K</td>
</tr>
<tr>
<td>12/07/07</td>
<td>HepBsAg</td>
<td>NEGATIVE</td>
<td>K</td>
</tr>
<tr>
<td>05/22/03</td>
<td>HepBsAg</td>
<td>NON REACTIVE</td>
<td>K</td>
</tr>
</tbody>
</table>

All Current Active Meds List
<table>
<thead>
<tr>
<th>Date</th>
<th>Drug</th>
<th>Mrar %</th>
<th>Dsr</th>
<th>Qty Fill</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/03/16</td>
<td>(O)ATORVASTATIN 20 MG ORAL TAB</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>08/28/16</td>
<td>(S)GLIPIZIDE 10 MG ORAL TAB</td>
<td>68</td>
<td>32</td>
<td>200 13</td>
</tr>
</tbody>
</table>
Timely Med Adherence Information
Engaging the Patient in Their Care

Personal Action Plan

The information being provided may be between 24 and 48 hours old. Some or all of the care gaps may have been completed during the current visit.

Generated on 11/07/2015

| Name: | Primary Care Provider: John Brian Bronson, M.D. |
| MRN: | Age: |
| Date of birth: | Gender: Male |

Cancer screening

<table>
<thead>
<tr>
<th>Health topic</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colorectal cancer screening</td>
<td>Current status: Up to date. Action to be taken: Good job! No Action needed.</td>
</tr>
<tr>
<td>Due date 06/05/2022</td>
<td></td>
</tr>
</tbody>
</table>

Heart health

<table>
<thead>
<tr>
<th>Health topic</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart/stroke risk</td>
<td>Heart/stroke risk: 24.3%. Status: Elevated. Action to be taken: Discuss how to best reduce your risk with your provider.</td>
</tr>
</tbody>
</table>

Additional information

You have the following personal risk factors, you should discuss how to reduce these risks with your provider:

- Quit smoking
- Lower your cholesterol
- Exercise and follow a healthy lifestyle to lower risk (also lowers blood pressure and cholesterol)

To find out more information on ways to reduce your heart attack/stroke risk, log onto your full Personal Action Plan at kp.org/actionplan.
Avoidable Health Care Costs with Better Medication Adherence

Avoidable Costs ($Billions)

- Congestive Heart Failure: $1.0
- HIV: $1.8
- Osteoporosis: $15.5
- Hypertension: $18.6
- Diabetes: $24.6
- Statins: $44.0

Engaging the Pharmacist to help with Medication Adherence

- KPSC outpatient pharmacists do targeted CV med adherence consultations in pharmacies.
It’s an Ongoing Journey Together

 We’ve made strides in the right direction.
 KP partners with Be There San Diego to improve the health and well being of all San Diegans.
 As studies show new benefits, we must continue to push the changes forward for our patient’s benefit.

Vs.