



Background



Cardiovascular disease (CVD) remains the number one cause of **death** and yet the mortality rate for young women has plateaued compared to men which is declining.



At Jefferson IM primary care only **3.4%** of women 40-60 carry the diagnosis of coronary artery disease (CAD) while the national prevalence is **6.4%**.



We still have inadequate CAD primary prevention strategies especially for women despite use of atherosclerotic cardiovascular disease (ASCVD) risk calculator.



The current screening guidelines do not adequately capture women who have already developed CAD and should be on lipid lowering therapy, given 44% of women with coronaries addressed on CT read have CAD detected.

Identifying Women with Coronary Artery Disease using non-cardiac CT Imaging Rachel Redfield MD¹, Rani Rajaram MD¹, Kathryn Anderson BA², Sarah Kamel MD², Matthew Metzinger MBA⁴, Lydia Liao MD², Katherine Sherif MD¹, Yair Lev MD⁵ 1. Department of Internal Medicine 2. Sidney Kimmel Medical College 3. Department of Breast Imaging 4. Department of Quality Improvement 5. Department of Cardiology

Aims

Identify the percentage of female patients with prior CT scans done for noncardiac reasons who should have the diagnosis of CAD.

Collaborate with primary care, cardiology and breast imaging to determine how best to integrate this incidental finding into clinical practice.

Determine current barriers that may prevent providers from taking action on patients with new CAD.

Intervention

Severe CAD demonstrated on noncontrast chest CT. Calcifications seen in right coronary artery (green), *left anterior descending (blue) and circumflex* (yellow).

Jefferson Quality Improvement department generated a list of women *without* diagnosis of CAD and *not* currently using statin who had CT chest done over the last 3 years for non-cardiac reasons.

Using REDcap our QI team compiled retrospective data of demographics, past medical history and results of CT chest.

Results

Atheroscleosis found on CT imaging 96 63 30 20

Total # of women with CAD or Aortic

Mild No CAD CAD nor Aortic Atherosclerosis

Moderate CAD

Severe CAD

Aortic Atherosclerosis



ASCVD risk and CAD (on CT) in women not on statin therapy



Discussion

Though we identified 44% of women who have CAD on CT, the overall total number is small since CT chest are not commonly ordered in an outpatient setting.

The diagnosis of CAD was rarely (<1%) in the "impression" of the image read making it difficult to identify in a busy primary care practice.

It is valuable and imperative to have shared decision making with primary care providers and patient incidental finding of CAD.

Future Direction

Interdisciplinary CVD prevention team

Primary care clinic educational meetings

EPIC software assistance

CAD results located in the "impression" of CT read





Background

- Cardiovascular disease (CVD) remains the number one cause of death and yet the mortality rate for young women has plateaued compared to men which is declining.
- We still have inadequate coronary artery disease (CAD) primary prevention strategies especially for women despite use of atherosclerotic cardiovascular disease (ASCVD) risk calculator.
- Unfortunately, this current screening guidelines do not adequately capture women who have already developed CAD and should be on lipid lowering therapy.
- At Jefferson primary care only 3.4% of women carry the diagnosis of CAD while the national prevalence is 6.4%

Aims

- Identify the percentage of female patients with prior CT scans done for non-cardiac reasons who should have the diagnosis of CAD
- Create an interdisciplinary process for identifying women at risk for cardiac event not currently captured with ASCVD screening

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Cardiovascular disease remains #1 cause of death in Women Intervention **Population** Outcome 97% 358 44% Women with **CT scan reads** coronaries addressed care do *not* carry reviewed to diagnosis of CAD evaluate for CAD on CT read have CAD IM = Internal Medicine; CAD = Coronary artery disease; BAC = Breast arterial calcification



Intervention



- Jefferson Quality Improvement department generated list of women *without* diagnosis of CAD and *not* currently using statin who had CT chest done over the last 3 years.
- Using REDcap our team compiled retrospective data of demographics, past medical history and results of CT chest

Results



Aims For Improvement

Future Direction

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CAD results located in the "impression" of CT read











ASCVD risk and CAD (on CT) in women not on statin therapy

Borderline Intermediate



High

No lipid panel



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Problem Definition

Include a description of the problem, supporting literature reviews, baseline performance data, and/or previous pilot data here.

Include your cause analysis in this area, explaining why this issue might be a problem at Jefferson.

Aims For Improvement

Please use the SMART format for presenting your aims. WHAT is going to get better, by HOW MUCH, and by WHEN? See this link for a reference http://www.ihi.org/resources/Pages/HowtoImpro ve/ScienceofImprovementSettingAims.aspx

Identifying Women with Coronary Artery Disease using non-cardiac CT Imaging Rachel Redfield MD¹, Rani Rajaram MD¹, Kathryn Anderson BS², Sarah Kamel MD², Jason Shames MD², Lydia Liao MD², Yair Lev MD⁴

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Intervention

Describe your improvement strategy here. What did you do, and how did you go about implementing change?

Measurement and Results

What did you measure, and how did performance change as a result of your project?

Use structure, process, outcome, and perhaps balancing measures. See this video for more information: <u>https://youtu.be/uow7mzrFif4</u>

Next Steps and Lessons Learned

Did you meet your aim for improvement?

If not, why not? What will you do or what would you recommend the next team to in order tim improve on your efforts?

If yes, what will your next goal for improvement be and how will you reach it?

What did your team learn about the improvement process?