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Evaluation Of Primary Prevention Of Cardiovascular Disease In Primary Care

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Abstract:
Aim: Using the USPTF guidelines to evaluate the adherence of a community hospital resident clinic to Primary prevention of CVD: use of aspirin, statins and smoking cessation. Proper implementation of these guidelines has potential to benefit millions of patients and also reduce the health care cost secondary to cardiovascular diseases

Methods: Inclusion and exclusion criteria were defined.

Inclusion criteria:

Age 55-65

Active patient at the resident clinic (seen at least once between June 2014 – April 2015)

Exclusion criteria:

History of coronary artery disease

Aged <55or>65

Retrospective EMR chart review was performed. Use of aspirin, statin type and dose, allergy/ contraindication to these medications and current smoking status were tabulated.

Results: Only 39% (372) of these patients were on aspirin for primary prevention. 66% (630) patients had an ASCVD risk score of more than 7.5, qualifying them for statin therapy. Out of these only 48%(302) were on optimal statin therapy, while 49%(309) were on suboptimal and 3%(19) were on no statin therapy. 58% (554) of the studies population was smoker in the studies population, despite documented counseling efforts by the clinicians.

Conclusions: The compliance to USPTF guidelines for primary prevention of CVD in resident clinic in community setting was much less than desired. Various educational measures including resident conferences and a reminder in the EMR has potential to increase the adherence to these guidelines.

Introduction:

- Despite the decline in recent years in the western world, cardiovascular disease remains the leading cause of mortality. The total number of deaths in United States, attributable primarily to cardiovascular disease was 864,480 in 2005. And this does not even take in consideration, it's role as a secondary cause of death[1]. Not surprisingly then, CVD has accounted for the most number of deaths every year in 99 out of the last 100 years.[2] According to the current estimates, the annual financial losses are up to 133 billion USD, which are projected to mount to 1 trillion USD by year 2030.[3] These gigantic figures underline the paramount importance that prevention of cardiovascular diseases deserves in our priorities as a health care provider. Almost half of the recent decline in the incidence of CVD has been attributed to primary prevention with reduction of risk factors like cigarette smoking, better lipid control etc.[4] The USPSTF recommends the use of aspirin for men age 45 to 79 years when the potential benefit due to a reduction in myocardial infarctions outweighs the potential harm. The USPSTF also recommends the use of aspirin for women age 55 to 79 years when the potential benefit of a reduction in ischemic strokes outweighs the potential harm.[5] In a meta-analysis published in BMJ in 2002, aspirin was found to

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reduce the combined outcome of any serious vascular event by about 25%; non-fatal MI by 33% and non-fatal stroke by 25%[6]**.** We performed a retrospective analysis of our resident clinic in a medium size community hospital, to evaluate the adherence to these highly effective measures of primary prevention of CVD.

Methods: The modalities studies in this study for the primary prevention of CVD were: Aspirin, Statins and Smoking cessation.

Inclusion criteria:

1. Age 55 to 65
2. Active patient at the resident clinic (seen at least once between June 2014 –April 2015)

Exclusion criteria:

1. Age <55 or >65
2. History of cardiovascular disease

A total of 1466 patients' charts were reviewed. After applying the inclusion and exclusion criteria 955 patients were included (n= 955). Use of aspirin, statin use and type and dose of statin, and allergy/ contraindication to these medications, and current smoking status were tabulated.10 year ASCVD risk score for these patients was calculated.

Results:

36% (344) of these patients were males and 64% (611) were females. Only 39% (372) of these patients were on aspirin for primary prevention. Out of those 61%(583) not on aspirin only 10% (59) had a documented contraindication to aspirin. With regards to lipid management, 66% (630) patients had an ASCVD risk score of more than 7.5, qualifying them for statin therapy. Out of these only 48%(302) were on optimal statin therapy, while 49%(309) were on suboptimal and 3%(19) were on no statin therapy. Out of those not on statin therapy, only 11% (2) had a documented contraindication for statins. 58% (554) of the studies population was smoker in the studies population, despite documented counseling efforts by the clinicians.

Discussion: The role of primary prevention in cardiovascular diseases has been firmly established. There are guidelines available by various professional bodies including USPTF, to help clinicians practice these modalities. These results also do not seem to be isolated, as other studies have shown similar results. In a study conducted by residents at Rutgers New Jersey Medical School, only 30% of all at-risk patients were taking aspirin.[7] It seems like, in the rushed 15 minutes appointments of the modern world's primary care physician, attention to these measures can be often missed. Ongoing focus on education and practice of adherence to these measures is of utmost importance.

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