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# Improving Cardiovascular Disease Outcomes Through Improved Risk Assessment

Kayla Foster

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## Introduction

- Cardiovascular disease (CVD) is the leading cause of death in the US
- Annual United States (US) cost $316 billion
  - Expected to triple by 2030
- Tennessee is 6th highest state in the US for CVD deaths
- Primary care plays a vital role in assessing for CVD risk
- Risk enhancing factors increase an individual's risk to develop CVD and must be considered when assessing a patient's risk
- One tool for assessing an individual's risk is the ASCVD Risk Estimator Plus by the American College of Cardiology and American Heart Association
- Clinical problem:
  - At the chosen clinical site, there is not a standardized or streamlined process currently for determining a patient's CVD risk which is necessary because cardiovascular disease can only be determined through invasive procedures. As a result, it is unclear if providers are adequately assessing a patient's risk for developing cardiovascular disease in order to implement primary prevention treatments to delay or prevent the onset of CVD.

## Project Goals

- Implement ASCVD risk scoring into standardized practice for all applicable patients
- Get ASCVD Risk Calculator integrated into the EHR for easier and quicker access
- Identify patients who have increased risk for developing CVD
- Through identification of risk, treatment can be initiated sooner to delay or even prevent CVD from occurring

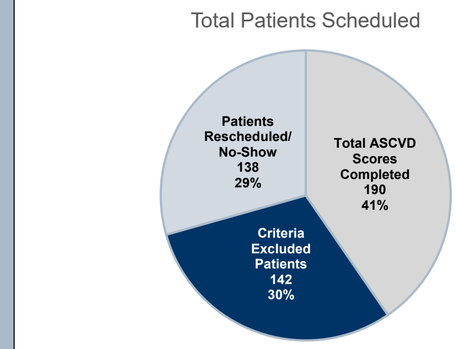
## Project Description

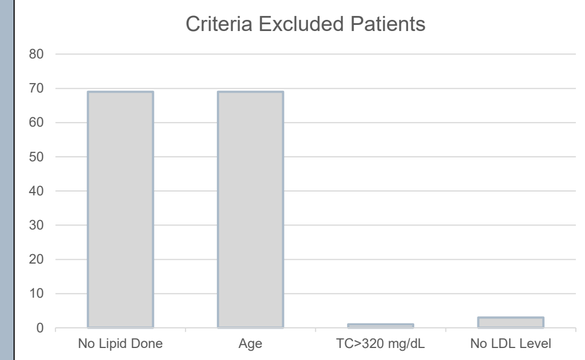
- The project was implemented in a primary care clinic in rural East Tennessee
- The clinic consisted of 3 clinics with 2 Nurse Practitioners (NP) and 1 Physicians Assistant (PA)
- ASCVD risk scores were calculated on all applicable patients who presented to clinic for fasting lab visit (FLV) between January 17 and February 28, 2022
- Charts were accessed to gather applicable data needed for calculation
- ASCVD risk scores were calculated through the free online website for public use
- ASCVD risk scores were attached to the patient's lab results and forwarded to the provider within the clinic's EHR

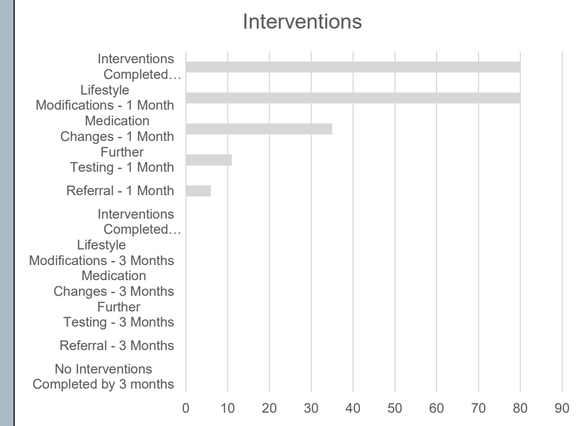
## Project Evaluation

- Chart reviews occurred at 1-month and 3-month intervals post FLV date to evaluate if an intervention was completed by the patient's provider
  - Data was exported into an excel sheet
  - Did the patient have intervention completed within 1 month of ASCVD risk calculation?
  - What interventions were completed?
  - Did the patient have an intervention that was completed after 1 month but before 3 months post ASCVD risk calculation?
  - What interventions were completed?
  - Did patient not have any interventions completed within 3 months of ASCVD risk calculation?
- Data was calculated to determine statistical findings

## Results




## References


- American College of Cardiology. (2018). ASCVD Risk Estimator Plus. American College of Cardiology Foundation. https://tools.acc.org/ASCVD-Risk-Estimator-Plus/#!/calculate/estimate/
- Centers for Disease Control and Prevention. (2020). *Heart Disease Facts* [Press release]. Heart Disease. www.cdc.gov/heartdisease/facts.htm


## Conclusions and Implications

- By completing ASCVD risk scores, providers may initiate treatment in a more-timely and streamlined manner
- Findings suggest that without a streamlined process, patients may not be adequately treated based on their risk
- Lifestyle modifications for CVD prevention is highly favorable as it has little to no risks involved and is indicated treatment in every risk category
- ASCVD risk scores still need further adjustment to more accurately assess an individual's risk in order to be used as stand-alone decision-making tools
- Until further adjustment occurs, ASCVD risk scores should be used to guide decision making rather than as stand-alone decision making
- ASCVD risk scores should be done in primary care settings on applicable patients according to guidelines

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