Improving Primary Care Screening for Familial Hypercholesterolemia

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Familial Hypercholesterolemia (FH) is the most common genetic condition resulting in cardiovascular disease, a leading cause of death in the United States. An estimated 90% of individuals with FH remain undiagnosed.

The purpose of this quality improvement project was to increase provider awareness and promote screening for FH among adults ages 20 years and older by: 1) educating providers about FH; 2) evaluating lipid screening practices on admission and every five years; 3) evaluating treatment status for clients exceeding the LDL-C 190 mg/dl cut-point; and 4) evaluating program impact on lipid screening practice.

A pre/posttest quality improvement project design with retrospective chart review assessed provider knowledge and screening practices documenting the proportion of patients screened for FH. Knowledge pretest-posttest surveys were sent by email to all clinic site providers with a continuing education article. Laminated copies of the cholesterol management guideline algorithms (Grundy et al., 2019) were provided as part of the educational program.

A retrospective chart review was conducted by EMR database searches to compare proportions of lipid tests recorded pre/post-education.

Outcome measures of FH knowledge were reported using descriptive statistics. An independent samples t-test showed no statistically significant change in screening practices pre/post-intervention (p = 0.976), with a mean interval of 2.09 years between initial and subsequent testing. Regression analysis yielded a medium correlation effect between age and lipid testing intervals, decreasing by .028 years for every one-year increase in age.

The proportion of clinic patients exceeding the expected population estimate for FH was significant (p < .001). Return of clinical impact survey data did not occur.

The Electronic Medical Record (EMR) based data collection process and online education delivery methods were a good fit for this project because they were low-cost, non-intrusive, and did not require participant cooperation from patients. Lipid screening was found to be done more frequently with increased age. Since FH increases risk from birth, this data might prompt a screening protocol discussion.

Opportunities for quality improvement have been identified at the study site for improved awareness and screening for FH. The prevalence of patients at high-risk for FH has been reported. Continued data collection, benchmarking and process improvement efforts can help prevent the premature morbidity and mortality associated with familial hypercholesterolemia.

References