

POSTER ABSTRACT

Implementation of a 10-year Cardiovascular Disease Risk Registry to Improve Risk Stratification and Self-Management Support on an Integrated Assertive Community Treatment Team

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Nicolas Nelson¹, Lyn Hardy

1: Advancing Quality Alliance (aqua), United Kingdom

Introduction

Patients with severe mental illness (SMI) are at higher risk for cardiovascular disease (CVD) than the general population yet screening for cardiometabolic disease and CVD risk in people with SMI remains low. Evidence-based guidelines use the pooled cohort equation (PCE) to estimate the 10-year atherosclerotic cardiovascular disease (ASCVD) risk score for risk management. Site evaluation, given the lack of a ASCVD risk calculator in the EHR, showed low screening rates and inability to identify high-risk patients. The QI project goal was development of a patient-centric automated 10-year ASCVD risk score registry for use in a population health management approach targeting CVD-related self-management support (SMS) interventions for an integrated Assertive Community Treatment (ACT) Team.

Practice Change Implemented

This real-time risk score registry was created by coding the PCE into Standard Query Language (SQL) generating a risk score from current patient data. The ACT team used this registry in weekly to identify patients with high risk scores guiding targeted SMS interventions.

Aim and theory of change

The project aim was to identify patients with high risk scores to guide care and to increase CVD-related SMS interventions by ACT team members. Change theory was guided by the Iowa Model for EBP, based on Roger's Diffusion of Innovations theory.

Targeted population and stakeholders

The target patient population were patients assigned to the ACT team with high ASCVD risk. ACT team staff (behavioral health nurse, counselor, peer-specialist, case managers, psychiatrist) were secondary targets as primary registry users.

Timeline

This project was implemented September through November, 2020.

Highlights

The registry provided an innovative approach calculating risk scores for 88.9% of eligible patients, where 18.6% were high-risk. The high-risk cohort showed an 88.4% increase in SMS interventions during the intervention period versus the pre-implementation comparison. Among high-risk patients, 77.8% had an increase in SMS interventions with a median increase of six (95% CI:0-14; $p=0.02$).

Sustainability

The registry was a facile tool integrated into the existing cardiometabolic registry used weekly by the ACT team to track chronic disease management. This allowed seamless implementation into the team's workflow. A user survey indicated high feasibility, acceptability, and appropriateness scores suggesting a sustainable practice change.

Transfer-ability

ASCVD risk algorithms are imbedded in many EHRs. Informaticians can access these data to created risk registries to stratify risk and target SMS interventions in team-based primary care and integrated behavioral health.

Conclusions

Implementing an auto-calculated 10-year ASCVD risk score registry on an integrated ACT team resulted in improved guideline concordant care and population health risk-stratification capabilities without significantly increasing team member workload.

Discussions

This project linked EBP and data science to address the lack of access to an ASCVD risk calculator. The resulting registry facilitated a population health management approach to improve care within an integrated ACT team.

Lessons learned

An interdisciplinary team led by an FNP can successfully interpret and utilize ASCVD risk-stratification data to increase SMS for high-risk patients. Behavioral health staff can successfully adopt medical SMS into their workflow and support a holistic approach to their patient care.