

A Quality Improvement Initiative to Improve Prevention of Cardiovascular Disease in Patients with Type II Diabetes Mellitus

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PROBLEM STATEMENT

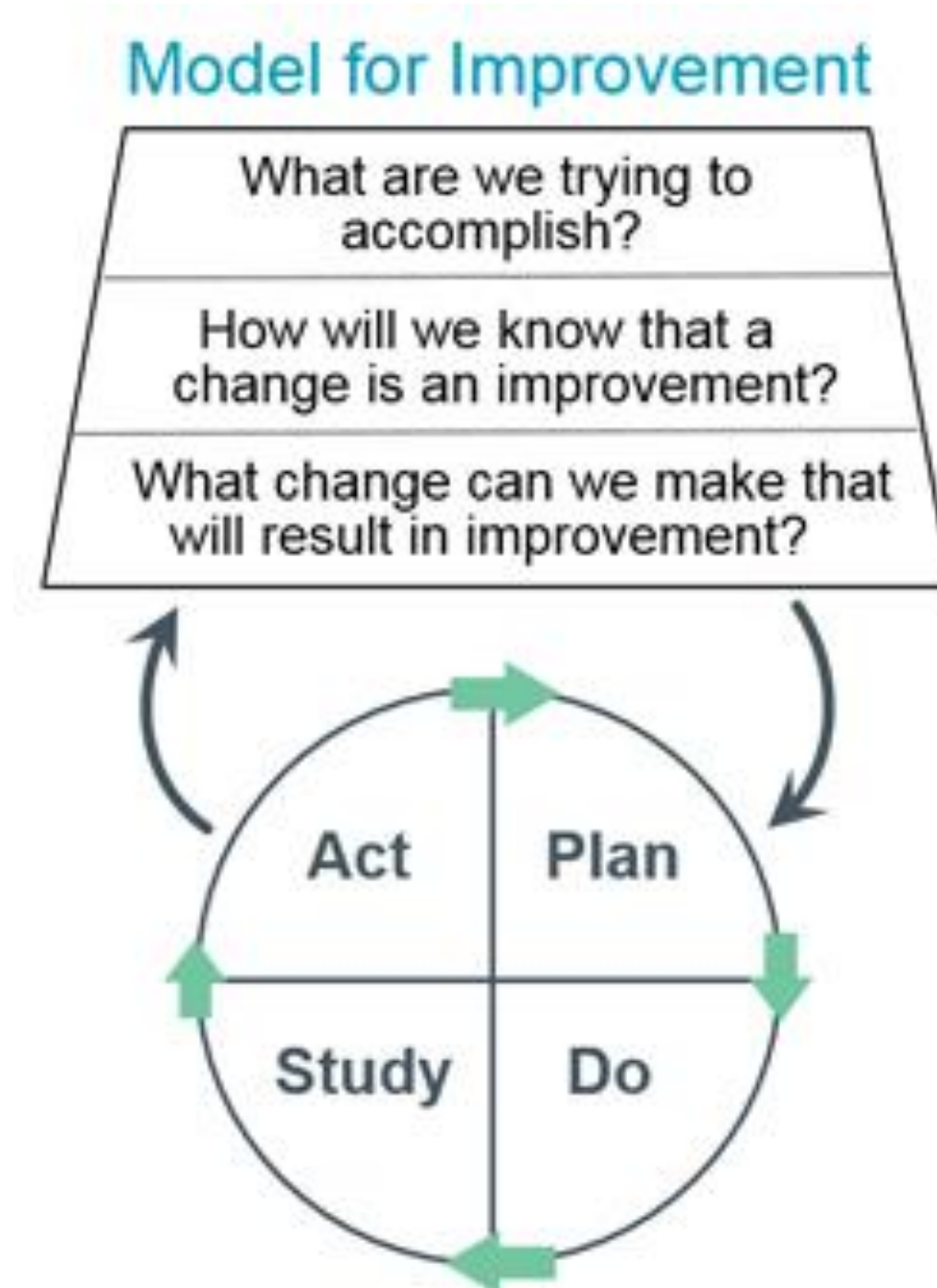
- Individuals with type II diabetes mellitus (T2DM) are twice as likely to develop heart disease or have a stroke compared to someone at a younger age without T2DM (McAllister, et al., 2018)
- Patients with T2DM would benefit from statins as a primary prevention, and yet there continues to be a large gap in statin use between national guideline recommendations and actual clinical practice (Bradley et al., 2019).
- Baseline chart reviews (n=100) at a primary care practice demonstrated there were no 10-year ASCVD risk scores captured
- Additionally, providers fell short on statin quality metric benchmarks and there was lack of educational material available to patients with T2DM

PROJECT PURPOSE

- Purpose: To prevent cardiovascular disease (CVD) formation in patients with T2DM
- Overarching Aim: Identify patients with T2DM who have ASCVD risk scores over 5%, and improve prevention of CVD by initiating statin therapy and lifestyle modifications based on national guidelines
- PICO-T: Will a clinic-based CVD prevention protocol improve the initiation of statin therapy by leveraging the ASCVD risk score on patients with T2DM, aged 40-75, when compared to current practice, over a 90-day period?

MODEL/NURSING THEORY

- Model: The Institute of Healthcare improvement Model for Improvement
- Nursing Theory: The Health Belief Model (HBM) theorizes that health-seeking behaviors are influenced by a person's perception of a threat from a health problem and the value associated with taking actions to reduce the threat



METHODS

Subjects

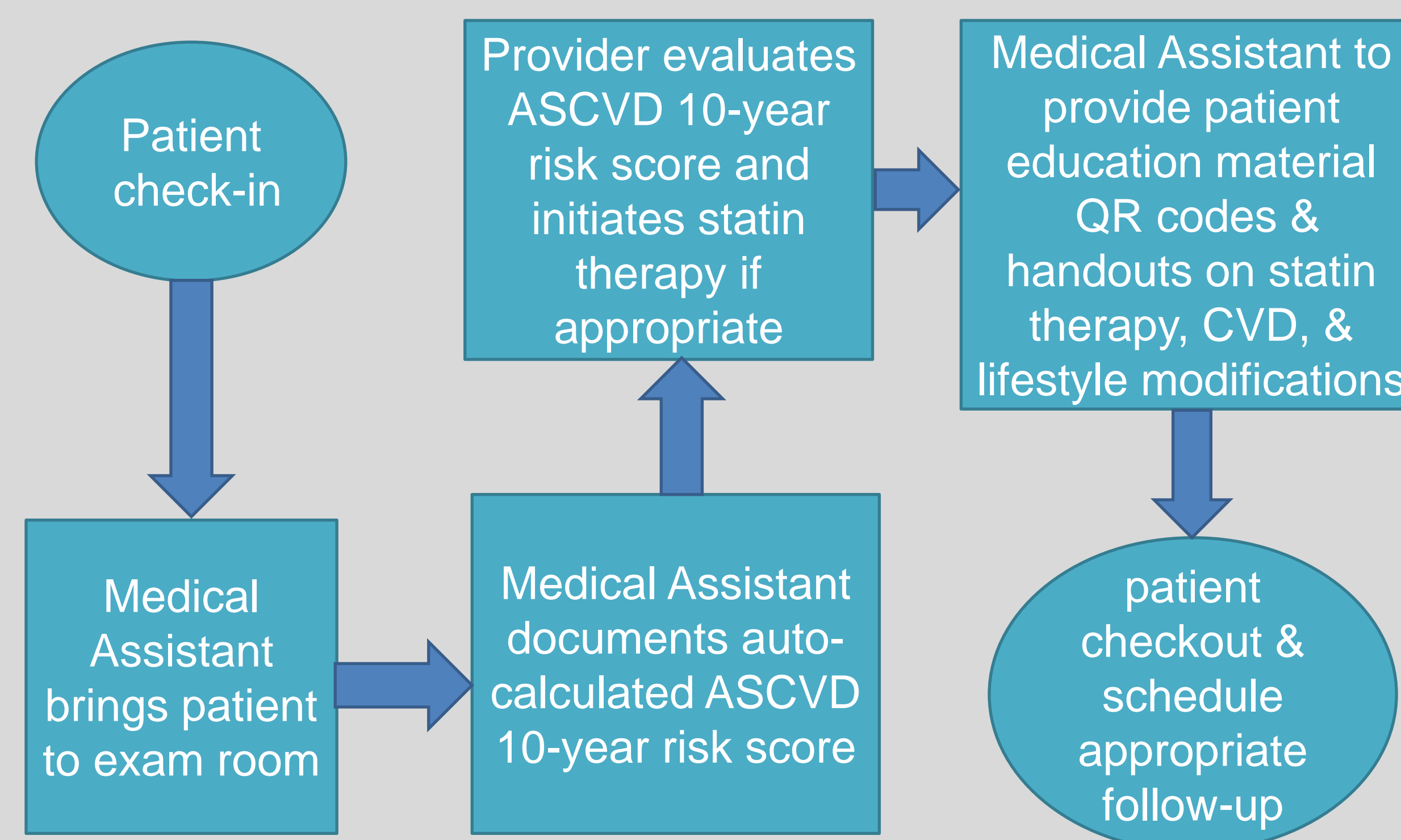
- Established patients with T2DM aged between 40-75 with no diagnosis of CVD

Setting

- Family primary care practice in west central Florida

Intervention and Data Collection

- The project involved implementation of a clinic-based protocol
- Staff underwent training on the protocol prior to implementation and the latest evidence-based ACC/AHA and ADA guidelines were reviewed with clinicians
- A workflow diagram, patient education materials, and posters were placed
- Weekly rounding was conducted with staff during the implementation
- Data was collected monthly via chart reviews for 90-days
- A quality metric score was also measured pre and post-intervention



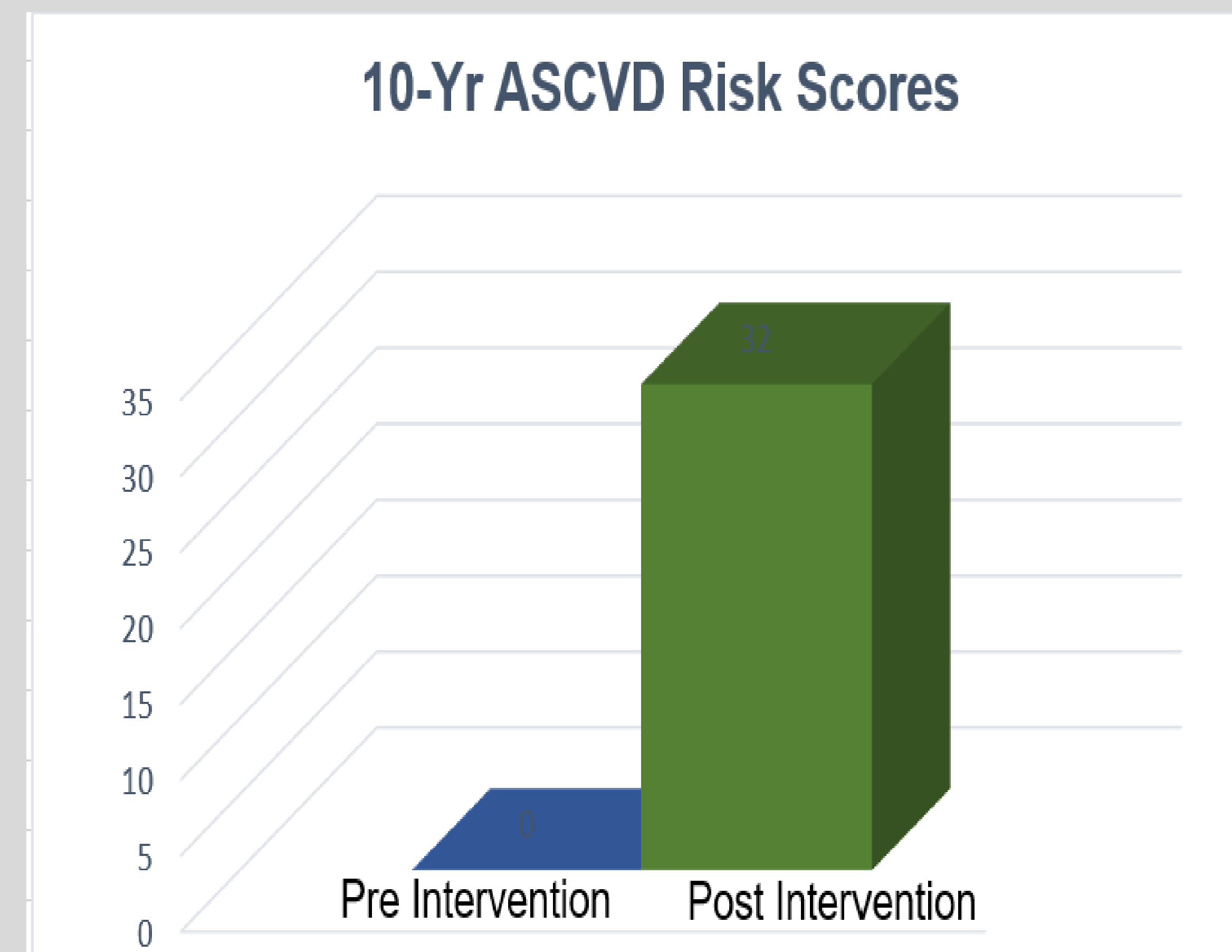
Data Analysis

- Fisher's exact test was used to determine statistical significance of new initiation of statin prescriptions
- Pre and post-intervention chart reviews were conducted to measure 10-year ASCVD risk scores and statin therapy every 30 days for 90 days
- The medical group measured the statin quality metric score pre and post intervention

RESULTS

- A Fisher exact test demonstrated statistical significance of new statin therapy initiation in the pre and post-intervention groups
- The Fisher exact test statistic value is 0.0089. The result is significant at $p < .05$.
- There was an overall 21.1% increase in statin initiation post intervention

	Yes statin therapy	No statin therapy	Marginal Row Totals
pre-intervention	1	41	42
post-intervention	8	26	34
Marginal Column Totals	9	67	76 (Grand Total)



- There was a 36.4% increase in documentation of 10-year ASCVD risk scores in the post intervention group
- The Merit-Based Payment Incentive System (MIPS) score demonstrated a 11% increase in the statin quality metric for patients with diabetes, aged 40-75, after 90-days of intervention

DISCUSSION

- Statistical and clinical significance were achieved with implementation of this process improvement protocol in the family practice setting
- Results demonstrated an increase in documentation of 10-year ASCVD risk scores, new statin prescriptions in patients with T2DM, and improved patient education over 90 days

LIMITATIONS

- The project was conducted during the coronavirus 2019 pandemic
- During the intervention there were high staff turnover, short-staffing and the practice moved to a new location
- There were limited patients seen for 1 week during the move and staff had to adapt to a new workflow

IMPLICATIONS FOR ADVANCE PRACTICE NURSING

- Advance practice nurses can effectively implement and utilize this protocol to improve risk reduction for CVD in their patients with T2DM, through primary prevention measures by capturing ASCVD 10-year risk scores and initiating appropriate statin therapy
- On a larger scale, this could result in decreased CVD diagnoses and hospitalizations for CVD sequelae
- Patients are expected to feel empowered in their self-care, health, and lifestyle

SUSTAINABILITY

- This protocol is low cost and easy to implement across other practices
- The protocol workflow can be made visible in workplaces and could be included in onboarding training
- A designated site super-user to be assigned and electronic resource folder with project related documents
- Electronic health records to include auto-calculations of 10-year ASCVD risk scores

REFERENCES

- Please scan the QR code for a full list of references



Initiation of a process improvement protocol demonstrated increased initiation of statin therapy in patients with T2DM and 10-year ASCVD risk scores