

# **Program Evaluation of Team-Based Model of Care in a General Cardiology Clinic: Impact on Access to Care and Patient Satisfaction**

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DNP Scholarly Project Presentation  
March 28, 2023

# **DNP PROJECT TEAM**

Advisor: Dr. Linda Eastham

Second Reviewer: Dr. Terri Yost

Practice Mentor: Dr. Kim Bednar

Cardiology Clinic CPI Team: Andrew Bowen, April Howell, Dr. Rohit Malhotra, Dr. Mike Valentine and Sue Waters

UVA Statistician: Dr. Ivy Hinton

UVA Data Specialists: Katie Pennock and Eli Meyer

UVA Patient Experience Officer: Andrea Burton

My Husband: Henry Sharpe

# BACKGROUND

- Team-based models of care can improve healthcare quality
  - Timeliness
  - Patient satisfaction
- American College of Cardiology supports team-based care in cardiology and the use of advanced practice providers (APPs)
  - 48% or 121.5 million American adults are living with some form of cardiovascular disease
  - Estimated deficit of general cardiologists by 2025: 8,000 to 16,000

## CLINICAL QUESTION

In adult patients in an outpatient general cardiology clinic, how does the implementation of a team-based model of care impact timely access to care and patient satisfaction?

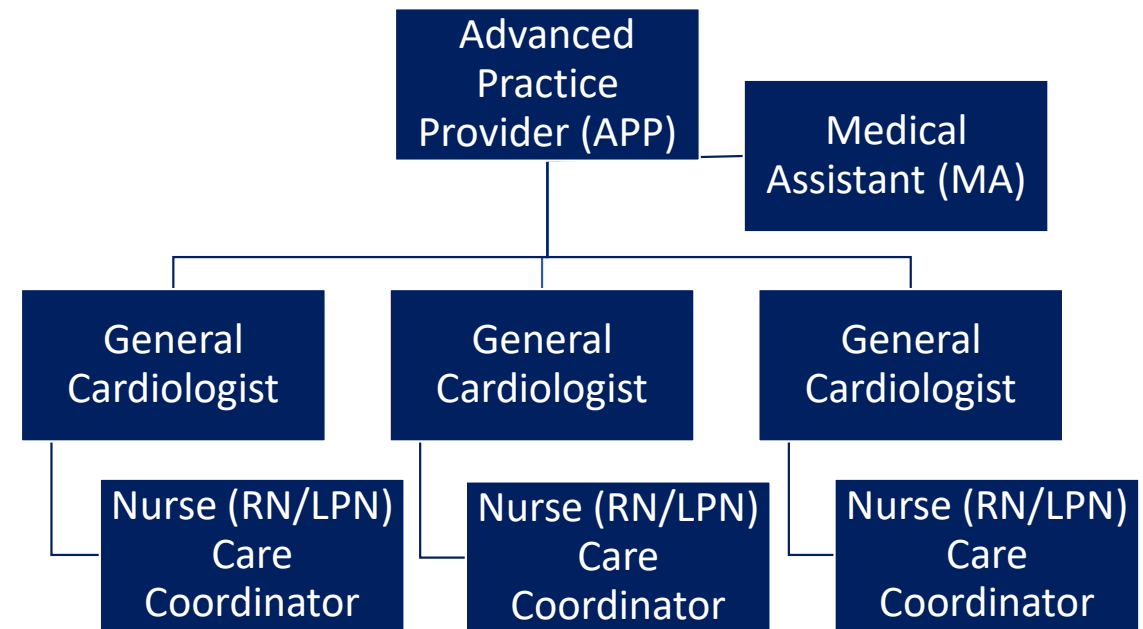
# REVIEW OF THE LITERATURE: SUMMARY

- Three themes emerged:
  - 1) Utilization of Advanced Practice Providers
  - 2) Team-Based Model with Use of Advanced Practice Providers
  - 3) Comparison of Different Models of Team Based Care
- Conclusions:
  - Access to care is increased by the implementation of team-based care with APPs
  - Team-based care may modestly improve patient satisfaction

# TEAM-BASED CARE (TBC) MODEL

- General cardiology clinic at a Mid-Atlantic academic medical center
- Started January 2022
- Program aim: increase access to care and patient satisfaction in the outpatient general cardiology clinic through the implementation of a team-based model of care

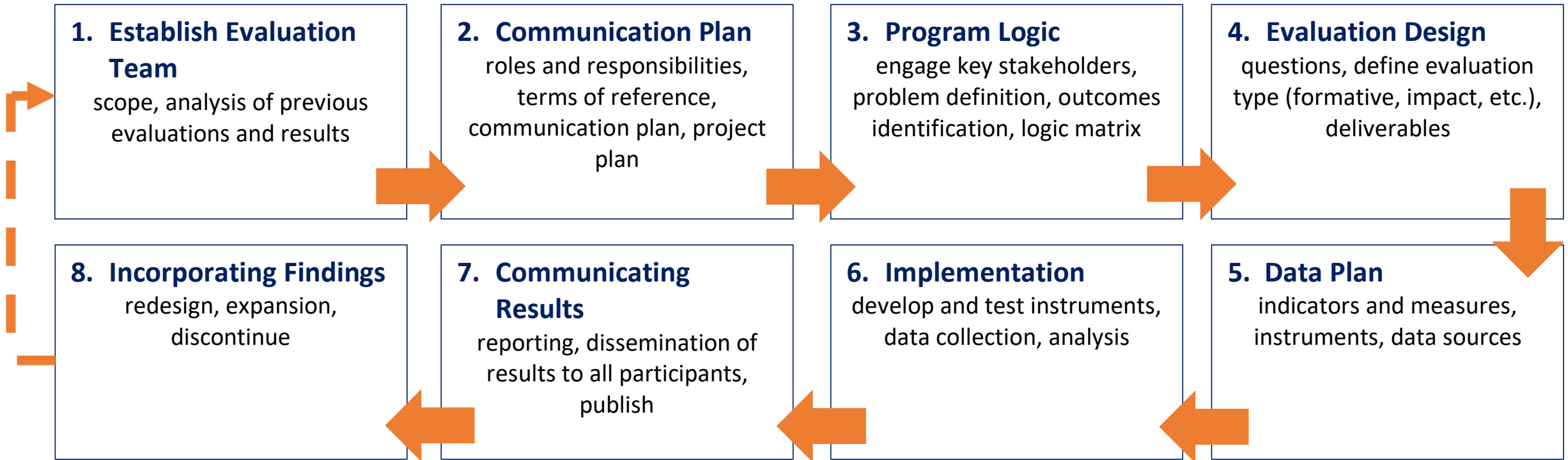
## Team Composition



# DNP PROJECT: PROGRAM EVALUATION

- Purpose: formative evaluation of the implementation of a team-based model of care in an outpatient general cardiology clinic and its impact on
  - Access to care
  - Patient satisfaction
- Evaluation Framework
  - Agency for Clinical Innovation (ACI) Program Evaluation Framework

# ACI Evaluation Cycle





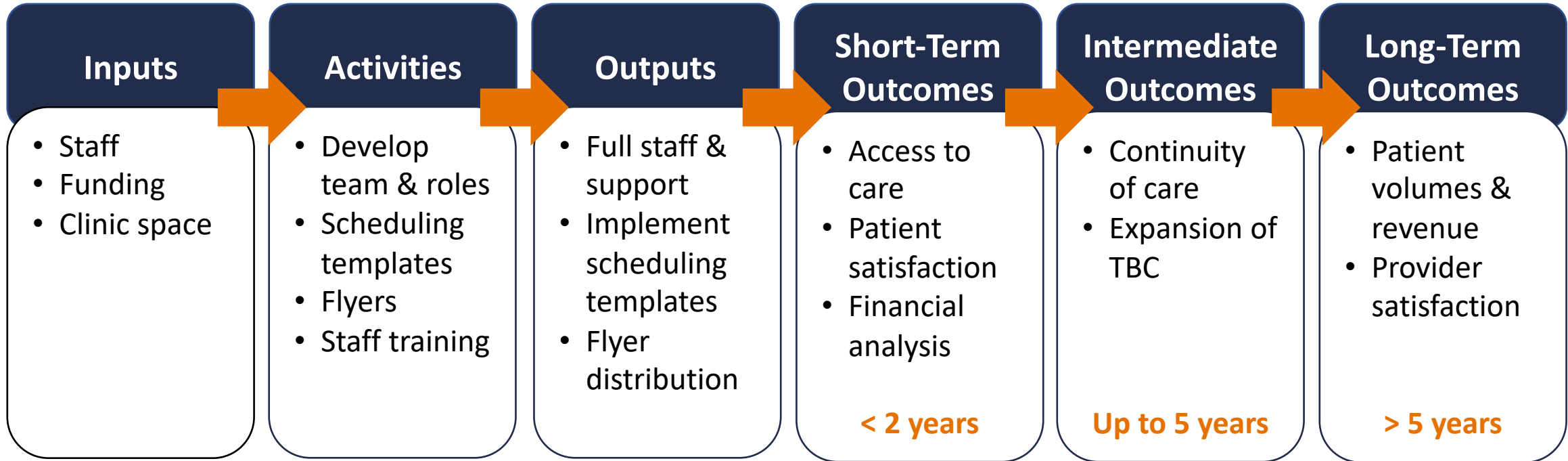
## **STEP 1: ESTABLISH EVALUATION TEAM**

- DNP student
- DNP advisor and second reviewer
- Practice mentor
- Statistician
- Clinical Practice Improvement (CPI) team

## **STEP 2: PLANNING**

- **Stakeholders**
  - CPI team including clinic director, clinic nurse manager and lead APP
  - Team-based care (TBC) participants including MDs, APPs, RNs and MAs
- **Communication Plan**
  - Bi-weekly meetings with DNP advisor
  - Monthly meetings with CPI team
  - Individual meetings with data specialists, statistician and others as needed

# STEP 3: PROGRAM LOGIC



## **STEP 4: EVALUATION DESIGN**

- Evaluation questions
  - What outcomes have been achieved for the participants, service providers and the healthcare system?
  - What unexpected outcomes occurred through the program, either adverse or positive?
  - Did the performance indicators relate to the program and quality improvement?
  - Are the program outcomes sustainable and adaptable to future sites?
  - Is the model of care acceptable to policy directions, service providers and the patient cohort?

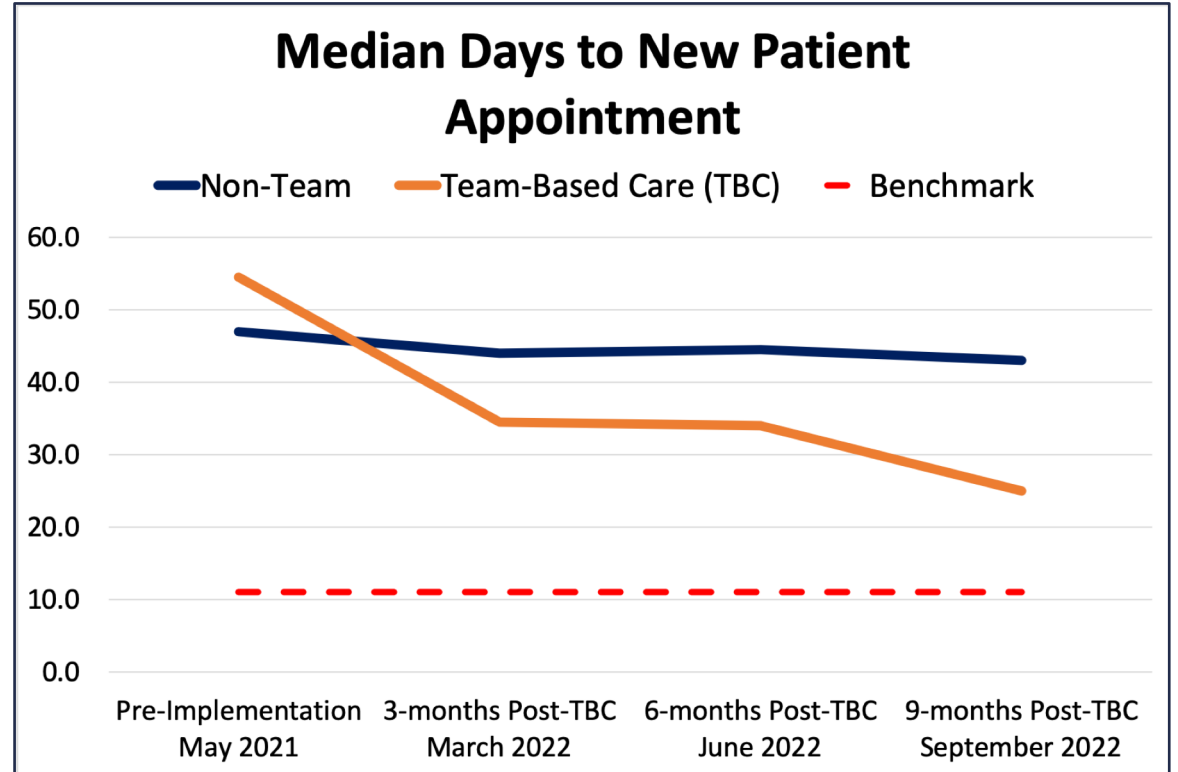
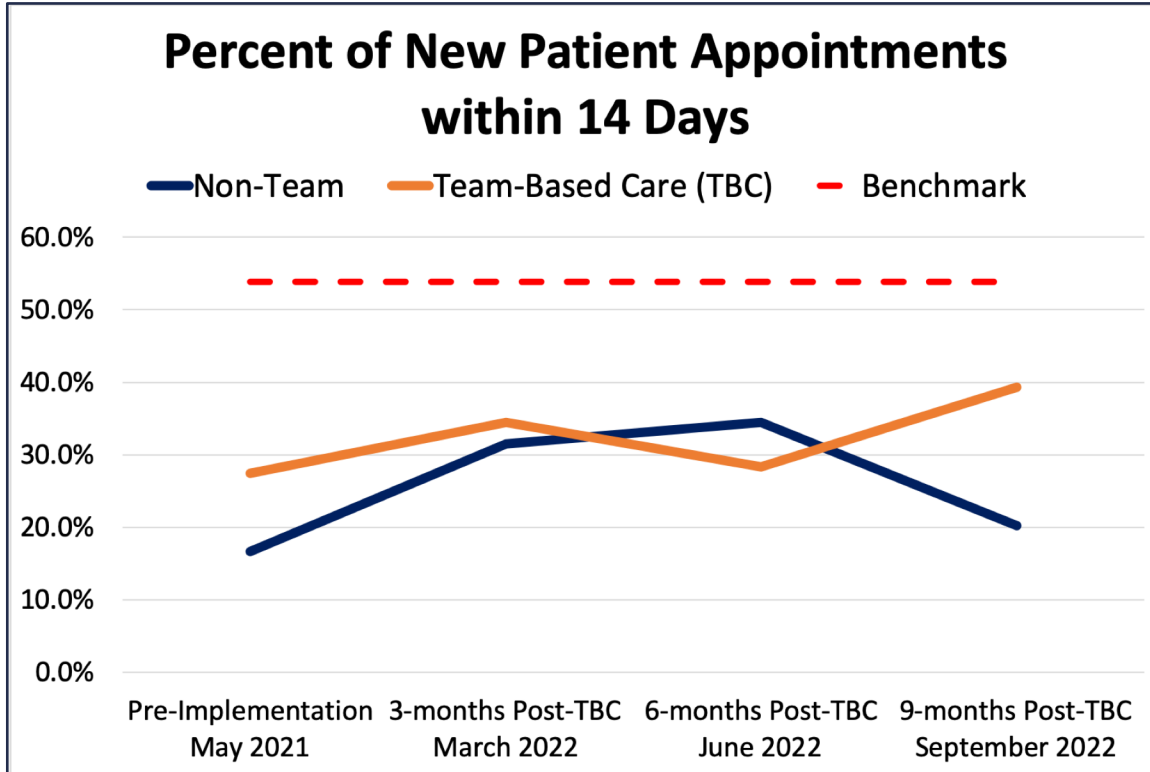
## **STEP 5: DATA PLAN**

- Pre- and Post-Implementation
- Outcomes Measured
  - **Access to Care**
    - Time to third available appointment
    - Time to new patient appointment
    - Percentage of new patient appointments within 14 days
    - Data Source: Institution's Data Portal
  - **Patient Satisfaction**
    - Press Ganey patient satisfaction survey
    - Data Source: Press Ganey Fusion Portal
- Descriptive Statistics

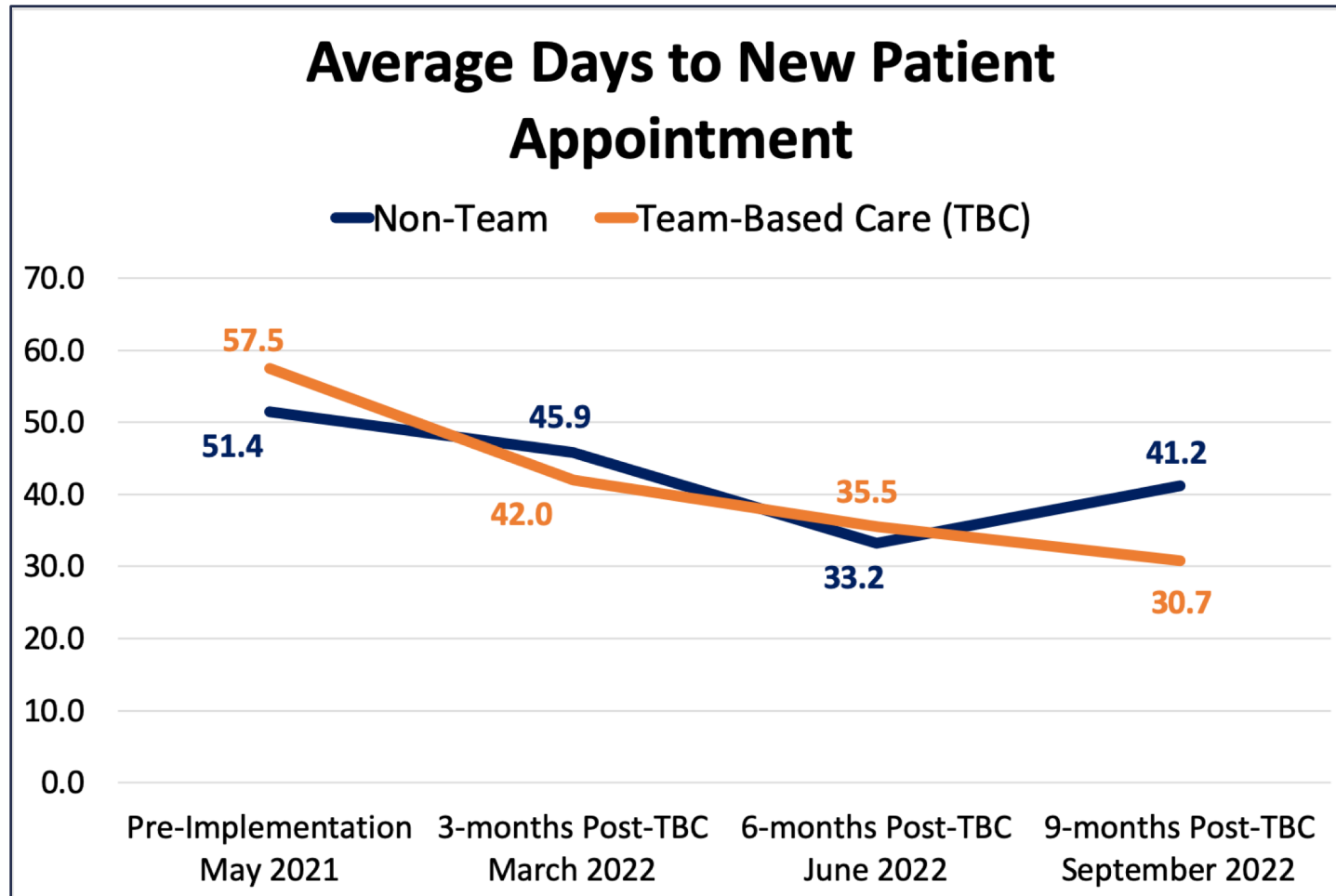
## **STEP 6: IMPLEMENTATION**

- IRB Determination of Not Human Subjects
- Evaluation in Fall 2022
- Access to Care Measures
  - Pre-TBC: May 2021
  - 3-months post-TBC: March 2022
  - 6-months post-TBC: June 2022
  - 9-months post-TBC: September 2022
- Patient Satisfaction
  - Pre-TBC: July 2021 - December 2021
  - 3-months post-TBC: January 2022 - March 2022
  - 6-months post-TBC: April 2022 - June 2022
  - 9-months post-TBC: July 2022 - September 2022

# RESULTS & ANALYSIS: NEW PATIENT APPOINTMENT

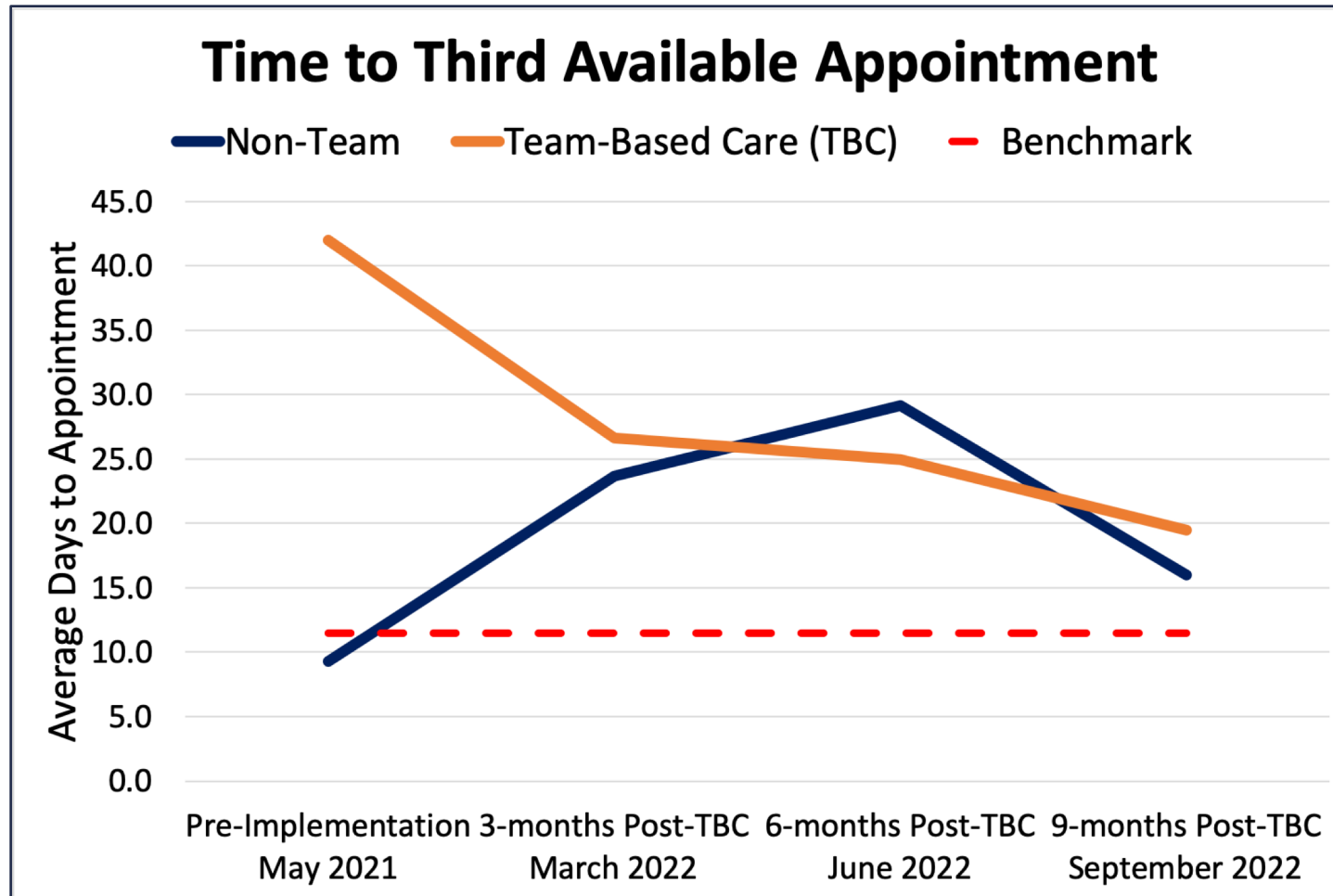


# RESULTS & ANALYSIS: NEW PATIENT APPOINTMENT

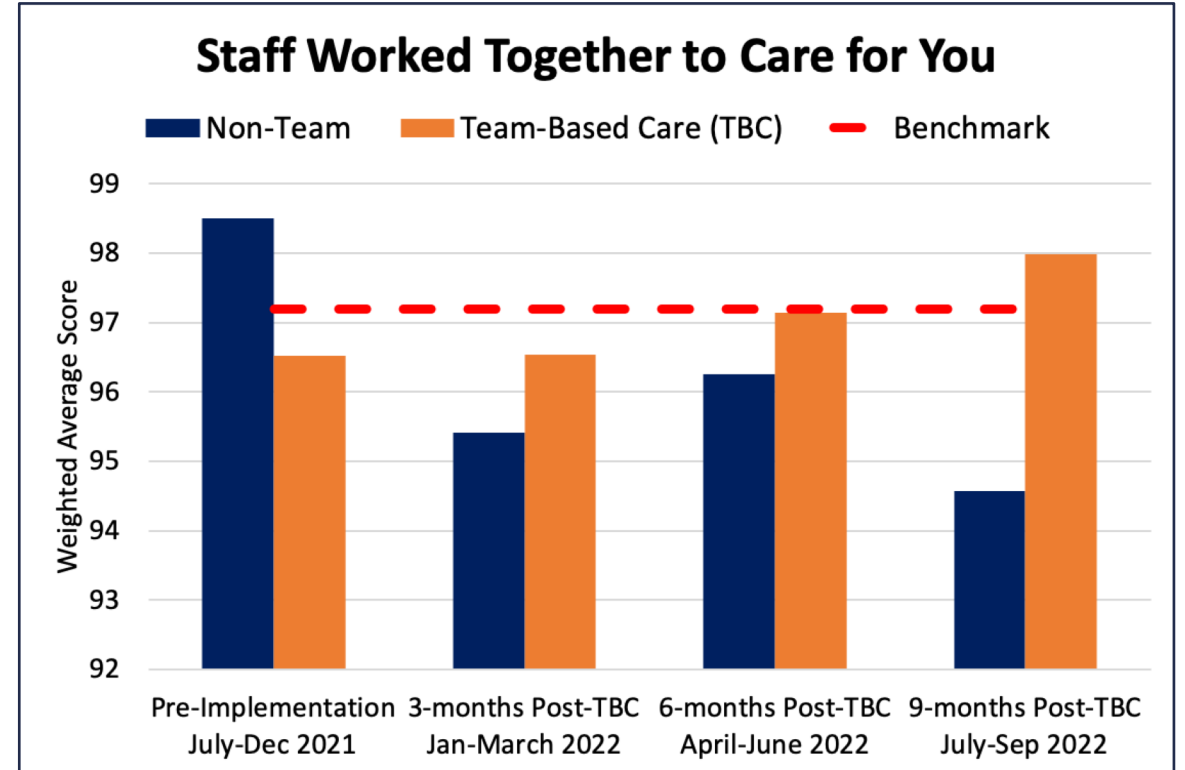
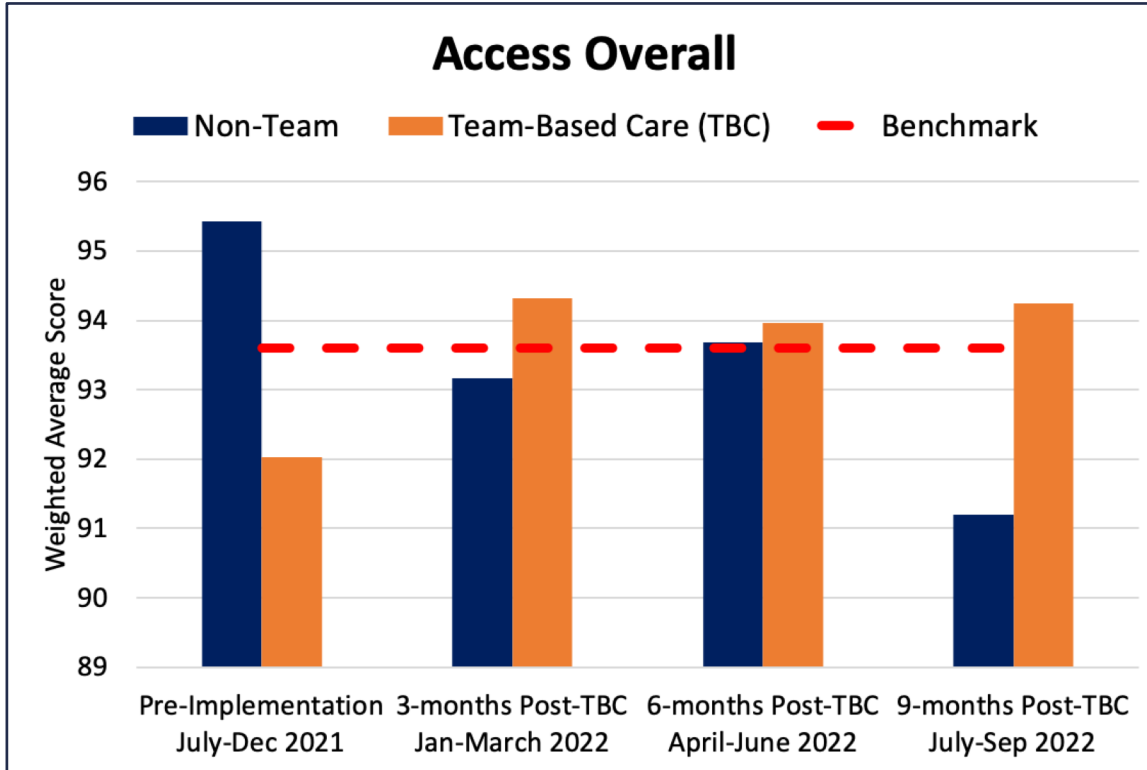




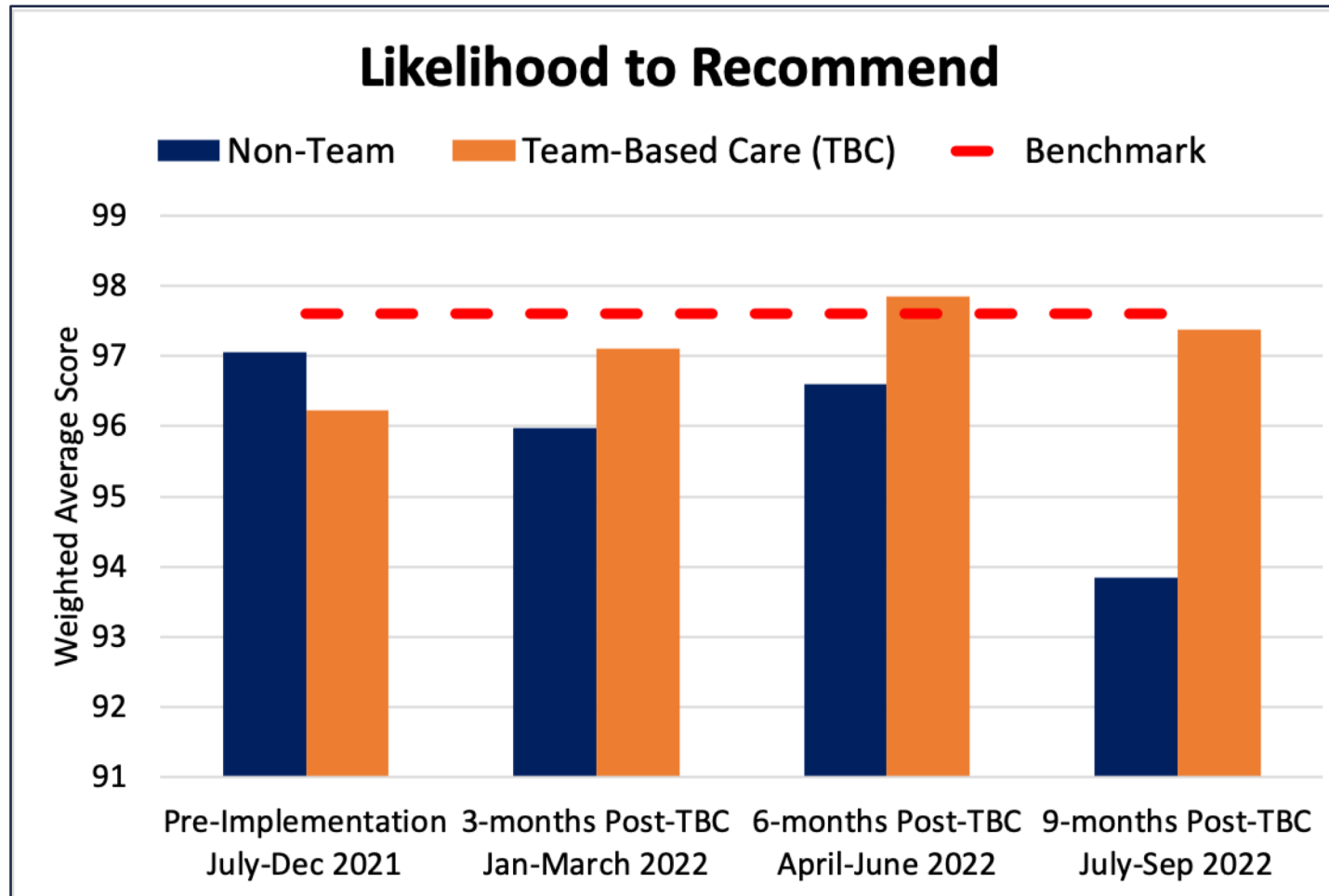
# RESULTS & ANALYSIS: THIRD AVAILABLE APPOINTMENT



# RESULTS & ANALYSIS: PATIENT SATISFACTION



# RESULTS & ANALYSIS: PATIENT SATISFACTION



# FINANCIAL ANALYSIS

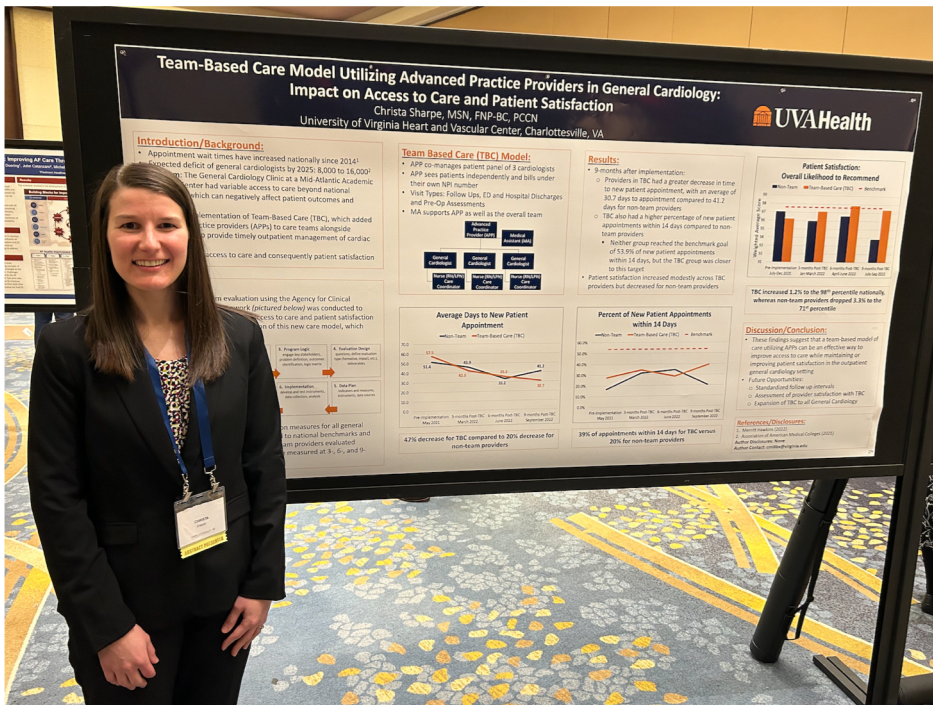
	Year #1 (2022)	Year #2 (2023)	Year #3 (2024)	3-Year Total
<b>Program Costs</b>				
APP Personnel Expenses	\$139,266.00	\$144,055.30	\$148,601.32	\$431,922.62
MA Support	\$36,720.00	\$37,821.60	\$38,956.35	\$113,497.85
Department Charges	\$14,817.77	\$16,892.26	\$18,136.95	\$49,846.98
<b>Program Cost Total</b>				<b>\$595,267.45</b>
<b>Revenue</b>				
Net Collections	\$189,262.46	\$215,759.20	\$231,657.24	\$636,678.90
Attributable Net Revenue	\$532,450.56	\$606,993.96	\$651,722.35	\$1,791,167.19
<b>Total Revenue</b>				<b>\$2,427,846.09</b>
<b>Total Net</b>	<b>\$530,909.56</b>	<b>\$623,984.00</b>	<b>\$677,685.07</b>	

<b>Total Net Gain</b>	<b>\$1,832,578.63</b>
<b>Return on Investment</b>	<b>308%</b>
<b>Net Present Value</b>	<b>\$1,723,788.78</b>

# STEP 7: COMMUNICATING RESULTS

- Dissemination Plan

- DNP defense presentation
- Presentation to stakeholders and CPI team at meeting
- Manuscript to be published in UVA's Libra database
- Submission to peer-reviewed journal – Journal for Healthcare Quality
- Poster presentation at ACC Cardiovascular Summit



## **STEP 8: INCORPORATING FINDINGS**

- Team-based care providers showed improvement in access to care and patient satisfaction
- **Nursing Practice Implications:**
  - Reduced cost of healthcare and improved quality
  - Contribution of knowledge to clinic improvement processes and utilization of APPs in specialty areas
- **Future Opportunities:**
  - Establishing standardized follow up timelines for stable patients
  - Assessment of provider satisfaction
  - Maximize APP utilization
  - Expansion of TBC to all General Cardiology

# STRENGTHS AND LIMITATIONS

## Strengths:

- High clinical relevance for stakeholders
- Opportunities for further evaluation

## Limitations:

- Staffing changes during implementation
- Available data
- Limited generalizability

# QUESTIONS??



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