

Cardiovascular risk profiles of primary care patients eligible for collaborative care for depression and anxiety

Zachary Bean, MD¹, Allison J. Carroll, PhD¹, Sarah E. Philbin, MPH¹, Havisha Pedalluma, BA¹, Sanaha Borisuth², Olutobi A. Sanuade³, Emily Fu, PhD MPH⁴, Lisa Rosenthal, MD¹, Jeffrey Rado, MD, MPH¹, C. Hendricks Brown, PhD¹, Justin D. Smith, PhD³

¹Northwestern University Feinberg School of Medicine, ²University of Illinois College of Medicine, ³Population Health Sciences, University of Utah, ⁴The Warren Alpert Medical School at Brown University

Background

- Depression, anxiety, and stress accelerate cardiovascular risk factors, but it is unclear whether treating these symptoms can improve cardiovascular health.
- **Collaborative care models (CoCM)** use population health methods to improve detection and treatment of depression and anxiety.
- Our **original 2021 study** elucidated drivers of successful CoCM implementation in an urban, tertiary care population.

Objectives

To evaluate **baseline cardiovascular risk profiles** of patients who engaged in CoCM compared to patients who were eligible for CoCM (i.e., have elevated depressive or anxiety symptoms) but did not engage in CoCM treatment.

Methods

- **Design:** secondary analysis of electronic health record data from 11 primary care clinics enrolled in a randomized roll-out effectiveness-implementation study of CoCM.
- **Study sample:** Primary care patients with PHQ-9 or GAD-7 score ≥ 10 :
 - CoCM patients: Patients who engaged in CoCM (i.e., attended ≥ 1 CoCM session).
 - Not referred: Patients eligible but not referred to CoCM.
 - Not engaged: Patients referred to but not engaged in CoCM.
- **Analysis:** ANOVA tests compared baseline systolic blood pressure, total cholesterol, and HbA1c between CoCM patients and the Not referred/Not engaged groups.

Results

	CoCM Patients (n=718)	Not Referred (n=1348)	Effect size (Cohen's d)	P-value	Not Engaged (n=1459)	Effect Size (Cohen's D)	P-value
Blood Pressure (mmHg)	123.7 \pm 15.9	121.5 \pm 15.78	0.31	<0.05	123.8 \pm 15.9	0.30	<0.05
Total Cholesterol (mg/dL)	198.9 \pm 37.0	192.9 \pm 37.00	0.44	<0.05	185.0 \pm 32.9	0.43	<0.05
HbA1c (%)	123.8 \pm 15.9	185.0 \pm 32.9	0.02	>0.05	5.4 \pm 0.6	0.01	>0.05

- **Blood Pressure (BP):** CoCM patients had slightly higher BP compared to Not Referred patients but similar BP to Not Engaged patients.
- **Cholesterol:** Higher in CoCM patients compared to both comparison groups.
- **HbA1c:** No significant differences were observed between CoCM patients compared to either comparison group.

Figure 1. Mean Blood Pressure (mmHg) across groups

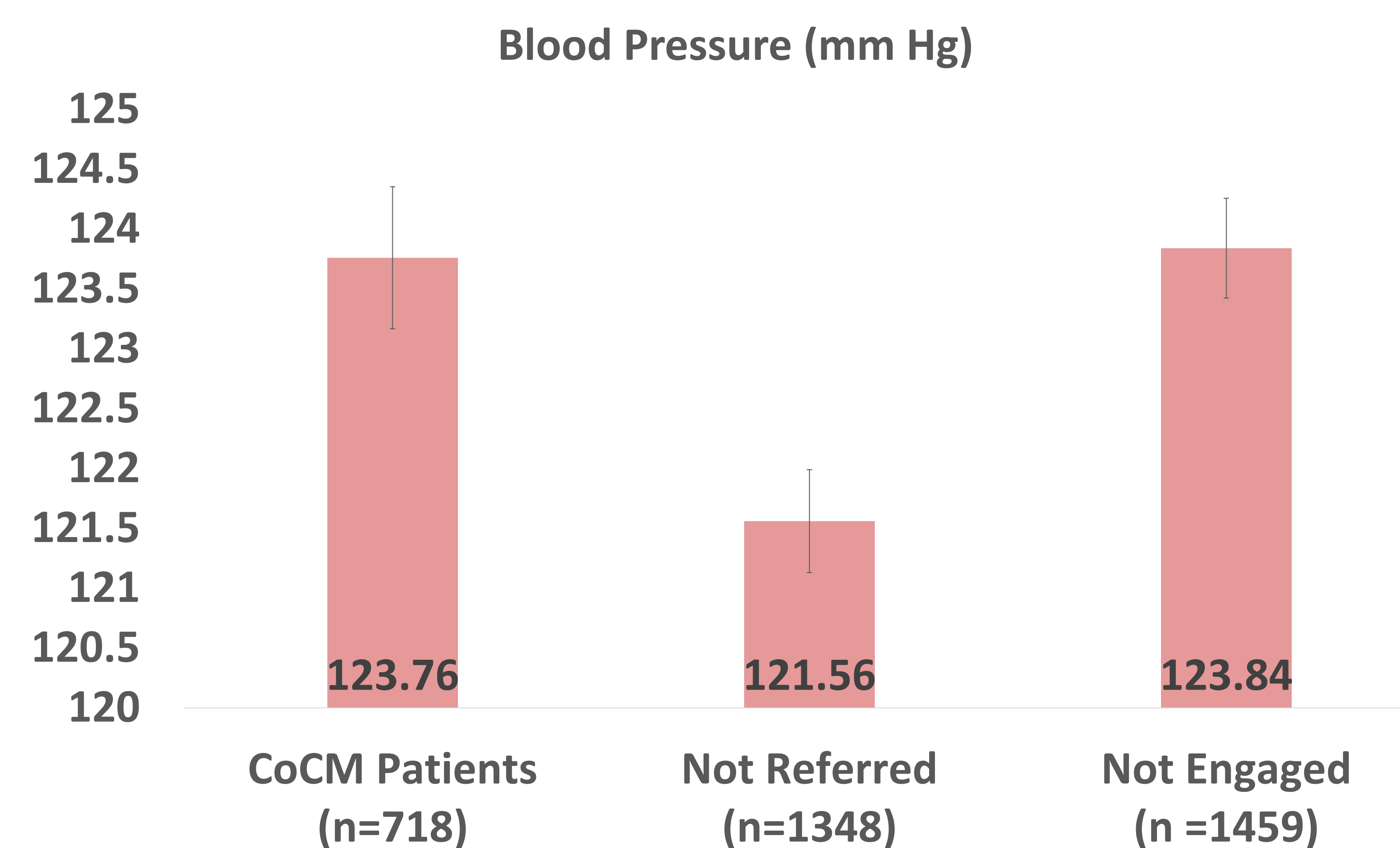
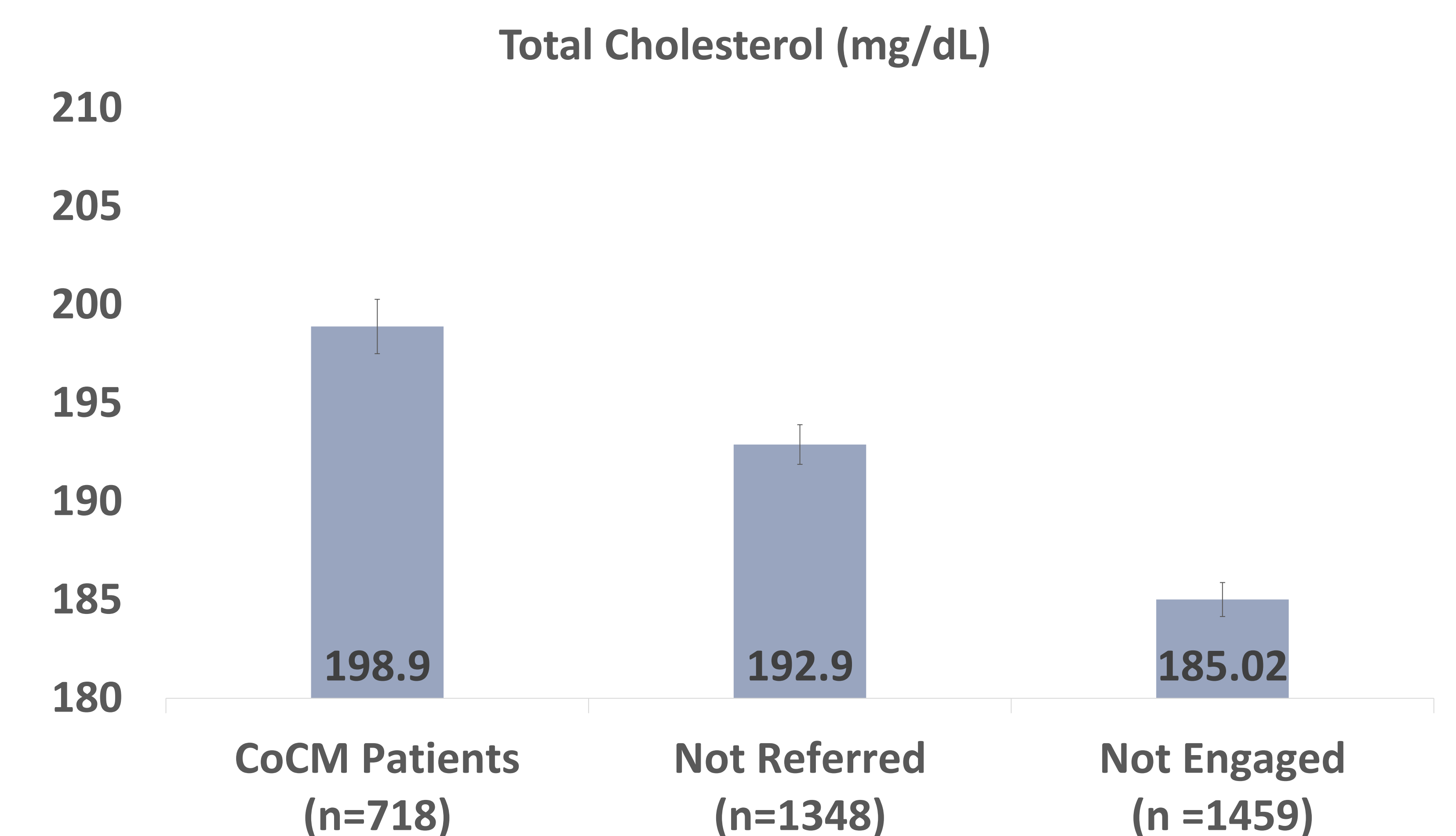


Figure 2. Mean Total Cholesterol (mg/dL) across groups



Conclusions

- Patients who engaged in CoCM treatment had **higher BP and cholesterol** than those who were eligible but not referred, and **lower BP** than those who were referred but not engaged.
- These findings suggest that **integrating cardiovascular risk monitoring** into CoCM could **enhance overall patient outcomes** and provide a more comprehensive model of care.
- **Next Steps:** evaluate whether CoCM can **improve cardiovascular risk profiles** for those who engage in treatment.

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