Supplementary Online Content

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eReferences

This supplementary material has been provided by the authors to give readers additional information about their work.

eTable 1. Sources Used for Qualifying Cardiac Events

Healthcare Common Procedure Coding System (HCPCS), International Classification of Disease, Tenth Revision, Procedure Codes (ICD-10 PCS), and International Classification of Disease, Tenth Revision, Clinical Modification (ICD-10 CM)

Cardiac Event	Code Type	Code
Acute Myocardial Infarction (AMI)	ICD-10 CM	I210, I2101, I2102, I2109, I211, I2111, I2119, I212, I2121, I2129, I213, I214, I219, I21A1, I21A9, I220, I221, I222, I228, I229
Coronary Artery	ICD-10 PCS	0210X, 0211X, 0212X, 0213X 33510, 33511, 33512, 33513, 33514, 33516, 33517, 33518,
Bypass Graft (CABG)	HCPCS	33519, 33521, 33522, 33523, 33530, 33533, 33534, 33535, 33536, 33572, 35600, S2205, S2206, S2207, S2208, S2209 02YA0Z0, 02YA0Z1, 02YA0Z2, 0BYM0Z0, 0BYM0Z1,
Heart Lung Transplant	ICD-10 PCS	0BYM0Z2, 02YA0Z0, 02YA0Z1, 02YA0Z2, 02RK0JZ, 02RL0JZ, 02RL0JZ, 02WA0JZ, 02WA0JZ
	HCPCS	33945, 33927, 33928, 0051T, 0052T, 0053T 02703ZZ, 02704ZZ, 02713ZZ, 02714ZZ, 02723ZZ, 02724ZZ, 02733ZZ, 02734ZZ, 3E07017, 3E070PZ, 3E07317,
Percutaneous Transluminal Coronary Angioplasty (PTCA)	ICD-10 PCS	3E073PZ, 02700ZZ, 02710ZZ, 02720ZZ, 02730ZZ, 02C00ZZ, 02C10ZZ, 02C20ZZ, 02C30ZZ, 02C03ZZ, 02C04ZZ, 02C13ZZ, 02C14ZZ, 02C23ZZ, 02C24ZZ, 02C33ZZ, 02C34ZZ
	HCPCS	92920, 92921, 92924, 92925, 92929, 92933, 92934, 92937, 92938, 92941, 92943, 92944, 92973, 92974
	ICD-10 PCS	027F, 027G, 027H, 027J, 02CF, 02CG, 02CH, 02CJ, 02NF, 02NG, 02NH, 02NJ, 02QF, 02QG, 02QH, 02QJ, 02RF, 02RG, 02RH, 02RJ, 02TH, 02VG, 02UF, 02UG, 02UH, 02UJ
Heart Valve Repair/Replacement	HCPCS	3361, 33362, 33363, 33364, 33365, 33366, 33367, 33368, 33369, 33370, 33371, 33372, 33373, 33374, 33375, 33376, 33377, 33378, 33379, 33380, 33381, 33382, 33381, 33392, 33393, 33394, 33395, 33396, 33397, 33398, 33399, 33400, 33401, 33402, 33403, 33404, 33405, 33406, 33407, 33408, 33409, 33410, 33411, 33412, 33413, 33414, 33415, 33416, 33417, 33418, 33419, 33420, 33421, 33422, 33423, 33424, 33425, 33426, 33427, 33428, 33429, 33430, 33460, 33461, 33462, 33463, 33473, 33474, 33475, 33476, 33477, 33478, 33377, 33378, 33379, 33380, 33381, 33382, 33384, 33385, 33386, 33397, 33371, 33372, 33373, 33374, 33375, 33376, 33377, 33378, 33379, 33380, 33381, 33382, 33383, 33384, 33385, 33386, 33397, 33388, 33399, 33400, 33401, 33402, 33403, 33404, 33405, 33406, 33407, 33408, 33409, 33410, 33411, 33412, 33413, 33414, 33415, 33416, 33417, 33418, 33419, 33420, 33421, 33422, 33423, 33424, 33425, 33426, 33427, 33428, 33429, 33430, 33460, 33461, 33462, 33463, 33464, 33429, 33430, 33460, 33461, 33462, 33463, 33464, 33429, 33430, 33460, 33461, 33462, 33463, 33464, 33465, 33466, 33467, 33468, 33470, 33471, 33472, 33473, 33474, 33475, 33476, 33477, 33478

eTable 2. Claims-based Definitions of Common Cardiovascular Conditions to Identify Cardiovascular-related Service Use, Costs, and Hospitalizations

Diagnosis	Туре	ICD-10 Code
	STEMI	I21.01, I21.02, I21.09, I21.11, I21.19, I21.21, I21.29, I21.3
	NSTEMI	I21.4
Heart attack	Unspecified	I21.9
	Type 2	I21.A1
	Other Types	I21.A9
	TIA	G45.0, G45.1, G45.2, G45.8, G45.9, I67.81, I67.82, I67.841, I67.848, I67.89
Stroke	Ischemic & hemorrhagic stroke	60.00, I60.01, I60.02, I60.10, I60.11, I60.12, I60.2, I60.20, I60.21, I60.22, I60.30, I60.31, I60.32, I60.4, I60.50, I60.51, I60.52, I60.6, I60.7, I60.8, I60.9, I61.0, I61.1, I61.2, I61.3, I61.4, I61.5, I61.6, I61.8, I61.9, I63.00, I63.011, I63.012, I63.013, I63.019, I63.02, I63.031, I63.032, I63.033, I63.039, I63.09, I63.10, I63.111, I63.112, I63.113, I63.119, I63.12, I63.131, I63.132, I63.133, I63.139, I63.19, I63.20, I63.211, I63.212, I63.213, I63.219, I63.22, I63.231, I63.232, I63.233, I63.239, I63.29, I63.30, I63.311, I63.312, I63.313, I63.319, I63.321, I63.322, I63.323, I63.329, I63.331, I63.332, I63.333, I63.339, I63.341, I63.342, I63.343, I63.349, I63.39, I63.40, I63.411, I63.412, I63.413, I63.419, I63.421, I63.422, I63.423, I63.429, I63.431, I63.432, I63.433, I63.439, I63.441, I63.442, I63.443, I63.449, I63.49, I63.50, I63.511, I63.512, I63.513, I63.519, I63.521, I63.522, I63.523, I63.529, I63.531, I63.532, I63.533, I63.539, I63.541, I63.542, I63.543, I63.549, I63.59, I63.6, I63.81, I63.89, I63.9
	Other stroke symptoms	G46.0, G46.1, G46.2, G46.3, G46.4, G46.5, G46.6, G46.7, G46.8, G97.31, G97.32, I66.01, I66.02, I66.03, I66.09, I66.11, I66.12, I66.13, I66.19, I66.21, I66.22, I66.23, I66.29, I66.3, I66.8, I66.9, I97.810, I97.811, I97.820, I97.821
Other Conditions	Other most frequently found cardiovascular disease codes	A5201, B3322, C380, D151, G454, G9340, G9341, G9349, G9389, G939, G968, G969, G980, G988, I011, I018, I019, I050, I051, I052, I058, I059, I060, I061, I062, I068, I069, I071, I078, I079, I080, I081, I082, I083, I088, I089, I0981, I0989, I099, I10, I110, I119, I130, I1310, I132, I150, I151, I152, I158, I159, I160, I161, I169, I200, I201, I208, I209, I236, I240, I241, I248, I249, I2510, I25110, I25111, I25118, I25119, I252, I253, I2541, I255, I256, I25700, I25701, I25708, I25709, I25710, I25718, I25719, I25720, I25721, I25728, I25729, I25739, I25750, I25758, I25759, I25790, I25791, I25798, I25799, I25810, I25811, I25812, I2582, I2583, I2584, I2589, I259, I270, I271, I2720, I2721, I2781, I2789, I279, I281, I288, I289, I300, I301, I308, I309, I311, I312, I313, I314, I318, I319, I32, I330, I339, I340, I341, I342, I348, I349, I350, I351, I352, I358, I359, I360, I361, I362, I368, I369, I370, I371, I372, I379, I38, I39, I400, I401, I41, I420, I421, I422, I423, I425, I426, I427, I428, I429, I43, I440, I441, I442, I4430, I4439, I444, I447, I450, I4510, I4519, I452, I453, I454, I455, I456, I4581, I4589, I459, I462, I468, I469, I470, I471, I472, I479, I480, I481, I482, I483, I484, I4891, I4892, I4901, I4902, I491, I492, I493, I4940, I4901, I4902, I491, I493, I4949, I495, I498, I499, I501, I5020, I5021, I5022, I5023, I5030, I5031, I5032, I5033, I5040, I5041, I5042, I5043, I50810, I509, I510, I511, I513, I514, I515, I517, I5181, I5189, I519, I52, I6200, I6201, I6202, I6203, I621, I629, I6501, I6502, I6503, I6509, I651, I6521, I6522, I6523, I6529, I658, I659, I672, I6781, I6782, I6783, I679, I680, I700.

Abbreviations. ICD-10, International Classification of Disease, Tenth Revision; NSTEMI, non-ST-elevation myocardial infarction; STEMI, ST-elevation myocardial infarction; TIA, transient ischemic attack.

eMethods 1. Physician Attribution Methodology Developed by the Centers for Medicare and Medicaid Services (CMS)

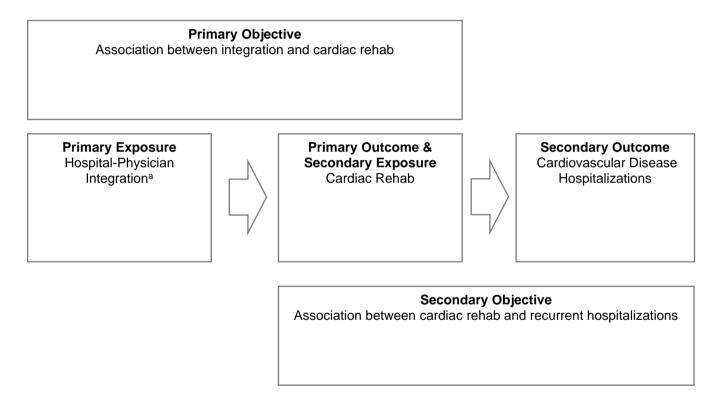
We attributed each patient to a physician (either a primary care physician or a cardiologist) using the patient attribution methodology developed by CMS. This methodology accounted for the share of allowed charges for primary care services during a patient's 12-month follow-up period. In alignment with CMS' methodology, we identified primary care services using Healthcare Common Procedure Coding System (HCPCS) codes in any location on the carrier (professional) claims. We identified the physician with the largest share of allowed charges for such services during the follow-up period as a patient's treating physician.

Healthcare Common Procedure Coding Systems (HCPCS) primary care service codes

HCPCS Code	Description
99201-99205	New patient, office, or other outpatient visit
99211–99215	Established patient, office, or other outpatient visit
99304-99306	New patient, nursing facility care
99307-99310	Established patient, nursing facility care
99315–99316	Established patient, discharge day management service
99318	Established patient, other nursing facility service
99324–99328	New patient, domiciliary or rest home visit
99334–99337 99339–99340	Established patient, domiciliary or rest home visit Established patient, physician supervision of patient (patient not present) in home, domiciliary, or rest home
99347–99350	New patient, home visit
99347–99350	Established patient, home visit
G0402	Initial Medicare visit
G0438	Annual wellness visit, initial
G0439	Annual wellness visit, subsequent
G0463	Hospital outpatient clinic visit (Electing Teaching Amendment hospitals only)

eFigure 1. Illustrative Diagram of the Study's Primary and Secondary Objectives

Primary and Secondary Objectives



^aGuided by prior research, we identified physicians as hospital-integrated if (1) the legal name for their tax identification number (TIN) referred to a hospital or a health system, or (2) 75 percent or more of their office and outpatient procedures were billed with hospital outpatient department place of service codes using the Medicare Data on Provider Practice and Specialty. Using the TIN approach, Ho et al. (2020) determined that about 88 percent of the physicians commonly identified in MD-PPAS and a commercial claims database had the same ownership type.¹ The claims-based approach developed by Neprash and colleagues, which identified integration status based on a physician's share of hospital outpatient claims, supplemented the remainder of physicians.²

eFigure 2. Illustration of the 3-stage modeling process for treatment effect estimation Variable selection for exposure via machine learning Models used: Select the Select the 1. Extreme gradient Held-out **Training** best most boosting sample performing important data 2. Random forests model for variables for **Potential** 3. Decision tree predicting predicting Confounders 4. Elastic net exposure exposure Most Use Estimate selected important treatment variables of (1) variables effect via both exposure for logistic propensity regression and outcome, and (2) score outcome only matching Variable selection for outcome via machine learning Models used: Select the Select the **Training** 1. Extreme gradient Held-out best most data boosting performing important sample 2. Random forests model for variables for 3. Decision tree predicting predicting 4. Elastic net outcome outcome Stage 1: Stage 2: Stage 3: Select potential **Propensity** Final confounders via score outcome machine learning matching model (logistic regression

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eMethods 2. Using Instrumental Variable Analysis to Estimate the Effect of Integration on Cardiac Rehab Participation

We performed an instrumental variable (IV) analysis to estimate the association between integration and cardiac rehab participation. We identified the level of hospital employment in a county, as measured by a county's proportion of integrated physicians, as the IV for this analysis. There is strong evidence from prior studies that patients are more likely to receive care closer to their place of residence.³ This suggests that patients who reside in counties with high levels of hospital-employed physicians would be more likely to seek care from hospital-integrated physicians, irrespective of underlying health conditions or other predictors of care patterns. We therefore used our area prevalence measure as an IV in this robustness check against the possibility of unobserved patient selection into treatment from integrated physicians.

We conducted two-stage generalized predictor substitution estimators (TSPS) described in Terza et al. (2008).⁴ This method is implemented in the R package OneSampleMR.⁵ The R implementation of TSPS performs generalized method of moment (GMM) estimation to ensure appropriate standard errors on its estimates similar to the approach introduced by Clarke et al. (2015).⁶ The first stage is a logistic regression model of the exposure regressed upon the instrument and any measured confounders. The second stage is a logistic regression model of the outcome regressed on the predicted values of the exposure from the first stage and any measured confounders.

For this analysis, the study sample consists of 20,403 patients with a known value for the IV (i.e., the proportion of integrated physicians in the county where the patient resides). We included study covariates that were identified as the strongest predictors of cardiac rehab using the machine learning approach described in our main analysis. Our results suggest that having an integrated primary care physician or cardiologist after a cardiac event is associated with a 26 percent increase in the odds of receiving cardiac rehab (odds ratio = 1.26 [95% CI: (1.05, 1.52)]). These results imply that, if anything, the numbers that we present in the main body of the paper are conservative estimates of the effect of integration on receiving cardiac rehab.

eTable 3. Odds Ratios and 95% Confidence Intervals Estimated by the Twostage Generalized Predictor Substitution Approach for the Primary Study Exposure (i.e., Receiving Care from an Integrated Physician) and other Study Covariates

Variable	OR (95% CI)
Integrated primary care physician or cardiologist	1.26 (1.05-1.52)
CABG at index	2.98 (2.68-3.31)
Age	0.99 (0.99-0.99)
AMI at index	0.83 (0.75-0.91)
Transportation - patient, provider, equipment	0.44 (0.41-0.48)
PTCA at index	1.24 (1.13-1.36)
Diagnostic cardiac catheterization, coronary arteriography	1.56 (1.42-1.71)
Excision of skin lesion	1.49 (1.39-1.60)
Region - Northeast	0.45 (0.41-0.50)
Region - South	0.57 (0.53-0.62)
Region - West	0.69 (0.60-0.79)
Physical therapy exercises, manipulation, and other procedures	1.51 (1.39-1.63)
Race - Black	0.61 (0.52-0.70)
Race - Other ¹	0.63 (0.52-0.76)
Race - Unknown	1.37 (1.04-1.81)
Female	0.82 (0.76-0.87)

Abbreviations. AMI, acute myocardial infarction; CABG, coronary artery bypass grafting; CI, confidence interval; OR, odds ratio; PTCA, percutaneous transluminal coronary angioplasty.

¹ Other race category includes: Asian, Hispanic, North American – Native, and others

eTable 4. Full Results of Unadjusted Comparisons between Patients of Hospital-Integrated Primary Care Physicians or Cardiologists and Patients of Independent Primary Care Physicians or Cardiologists

Variable	Patients of Independent PCPs or Cardiologists in Follow-Up, No. (%) (N=19559)	Patients of Integrated PCPs or Cardiologists in Follow-Up, No. (%) (N=9037)	Overall, No. (%) (N=28596)
All-Cause Inpatient Charges (Pre-Index)	,		,
High (≥75% Percentile)	4928 (25.2)	2221 (24.6)	7149 (25.0)
Low (<75% Percentile)	2605 (13.3)	1439 (15.9)	4044 (14.1)
None	12026 (61.5)	5377 (59.5)	17403 (60.9)
CVD Inpatient Charges (Pre-Index)			
High (≥75% Percentile)	4846 (24.8)	2303 (25.5)	7149 (25.0)
Low (<75% Percentile)	481 (2.5)	259 (2.9)	740 (2.6)
None	14232 (72.8)	6475 (71.6)	20707 (72.4)
All-Cause Outpatient Charges (Pre-Index)			
High (≥75% Percentile)	4709 (24.1)	2440 (27.0)	7149 (25.0)
Low (<75% Percentile)	12006 (61.4)	5941 (65.7)	17947 (62.8)
None	2844 (14.5)	656 (7.3)	3500 (12.2)
CVD Outpatient Charges (Pre-Index)			
High (≥75% Percentile)	4759 (24.3)	2390 (26.4)	7149 (25.0)
Low (<75% Percentile)	6999 (35.8)	4261 (47.2)	11260 (39.4)
None	7801 (39.9)	2386 (26.4)	10187 (35.6)
All-Cause Office Charges (Pre-Index)			
High (≥75% Percentile)	5394 (27.6)	1755 (19.4)	7149 (25.0)
Low (<75% Percentile)	12738 (65.1)	6040 (66.8)	18778 (65.7)
None	1427 (7.3)	1242 (13.7)	2669 (9.3)
CVD Office Charges (Pre-Index)			
High (≥75% Percentile)	5598 (28.6)	1551 (17.2)	7149 (25.0)

Low (<75% Percentile)	4132 (21.1)	1362 (15.1)	5494 (19.2)
None	9829 (50.3)	6124 (67.8)	15953 (55.8)
All-Cause Outpatient Visits (Pre-Index)			
High (≥75% Percentile)	3930 (20.1)	3646 (40.3)	7576 (26.5)
Low (<75% Percentile)	12785 (65.4)	4735 (52.4)	17520 (61.3)
None	2844 (14.5)	656 (7.3)	3500 (12.2)
CVD Outpatient Visits (Pre-Index)			
High (≥75% Percentile)	5172 (26.4)	4146 (45.9)	9318 (32.6)
Low (<75% Percentile)	6586 (33.7)	2505 (27.7)	9091 (31.8)
None	7801 (39.9)	2386 (26.4)	10187 (35.6)
All-Cause Office Visits (Pre-Index)			
High (≥75% Percentile)	5702 (29.2)	1774 (19.6)	7476 (26.1)
Low (<75% Percentile)	13246 (67.7)	6492 (71.8)	19738 (69.0)
None	611 (3.1)	771 (8.5)	1382 (4.8)
CVD Office Visits (Pre-Index)			
High (≥75% Percentile)	5770 (29.5)	1423 (15.7)	7193 (25.2)
Low (<75% Percentile)	6374 (32.6)	2246 (24.9)	8620 (30.1)
None	7415 (37.9)	5368 (59.4)	12783 (44.7)
Myocardial Infarction	2205 (11.3)	1215 (13.4)	3420 (12.0)
Congestive Heart Failure	3886 (19.9)	2387 (26.4)	6273 (21.9)
Peripheral Artery Disease	3071 (15.7)	1953 (21.6)	5024 (17.6)
Stroke	2466 (12.6)	1368 (15.1)	3834 (13.4)
Dementia	361 (1.8)	207 (2.3)	568 (2.0)
Pulmonary Disease	3272 (16.7)	1950 (21.6)	5222 (18.3)
Rheumatic Disease	456 (2.3)	302 (3.3)	758 (2.7)
Peptic Ulcer Disease	191 (1.0)	92 (1.0)	283 (1.0)
Liver Disease (Mild)	556 (2.8)	324 (3.6)	880 (3.1)
Diabetes	3889 (19.9)	1871 (20.7)	5760 (20.1)
Diabetes with Complications	2136 (10.9)	1396 (15.4)	3532 (12.4)
Paralysis	80 (0.4)	45 (0.5)	125 (0.4)

eTable 4 continued. Full Results of Unadjusted Comparisons between Patients of Hospital-Integrated Primary Care Physicians or Cardiologists and Patients of Independent Primary Care Physicians or Cardiologists

Variable	Patients of Independent PCPs or Cardiologists in Follow-Up, No. (%) (N=19559)	Patients of Integrated PCPs or Cardiologists in Follow-Up, No. (%) (N=9037)	Overall, No. (%) (N=28596)
Renal Disease	2934 (15.0)	1789 (19.8)	4723 (16.5)
Cancer	1337 (6.8)	816 (9.0)	2153 (7.5)
Liver Disease (Severe)	41 (0.2)	33 (0.4)	74 (0.3)
Metabolic Syndrome	160 (0.8)	103 (1.1)	263 (0.9)
HIV	29 (0.1)	36 (0.4)	65 (0.2)
History of Cardiac Event during Baseline	323 (1.7)	168 (1.9)	491 (1.7)

Abbreviations. CVD, cardiovascular disease; HIV, human immunodeficiency virus; PCP, primary care physician.

eTable 5. Model Accuracy Metrics from Machine Learning Algorithms Predicting the Primary Exposure (i.e., Receiving Care from an Integrated Primary Care Physician or Cardiologist)

Model	Recall	Balanced Accuracy	AUC
Extreme gradient boosting	0.935	0.806	0.845
Random forests	0.921	0.806	0.834
Decision trees	0.918	0.799	0.827
Elastic net	0.935	0.806	0.845

Abbreviations. AUC, area under the curve.

eTable 6. Model Accuracy Metrics from Machine Learning Algorithms Predicting the Primary Outcome (i.e., Receiving Post-Index Cardiac Rehab Services)

Model	Recall	Balanced Accuracy	AUC
Extreme gradient boosting	0.901	0.642	0.700
Random forests	0.902	0.628	0.687
Decision trees	0.872	0.615	0.654
Elastic net	0.909	0.621	0.687

Abbreviations. AUC, area under the curve.

eTable 7. Model Accuracy Metrics from Machine Learning Models Predicting the Secondary Exposure (i.e., the Likelihood of Cardiac Rehab Participation)

Model	Recall	Balanced Accuracy	AUC
Gradient Boosted Trees	0.919	0.561	0.627
Random forests	0.919	0.559	0.626
Decision Trees	0.879	0.564	0.604
Elastic Net	0.956	0.547	0.651
Elastic Net	0.956	0.547	0.651

Abbreviations. AUC, area under the curve.

eTable 8. Most Important Variables Identified by the Elastic Net Algorithm for Predicting Recurrent Cardiovascular-related Hospitalizations (i.e., the Secondary Outcome)

Ranking	Variable	Overall
1	Congestive Heart Failure (pre-index)	33.1%
2	CCS Category: Colostomy, temporary or permanent (pre-index)	32.3%
3	AMI (index event)	28.4%
4	Renal Disease (pre-index)	22.8%
5	CCS Category: Lower gastrointestinal X-ray (pre-index)	22.7%
6	Diabetes with Complication (pre-index)	19.6%
7	CCS Category: Use of Transportation for Emergency/Non-Emergency Care (pre-index)	19.0%
8	Low office visit (pre-index)	14.6%
9	CCS Category: Radioisotope Pulmonary Scan (pre-index)	14.3%
10	CCS Category: Arthroplasty Knee (pre-index)	13.6%
11	No CVD inpatient charge (pre-index)	13.4%
12	Low CVD inpatient charge (pre-index)	12.0%
13	Cardiac Rehab Use (post-index)	11.0%
14	CCS Category: Other OR Lower GI Therapeutic Procedures (pre-index)	10.6%
15	Diabetes (pre-index)	8.9%
16	Peripheral Vascular Disease (pre-index)	8.7%
17	CCS Category: Contrast Arteriogram of Femoral and Lower Extremity Arteries (pre-index)	8.2%
18	CCS Category: Diagnostic Cardiac Catheterization (pre-index)	8.2%
19	CCS Category: Ancillary Services (pre-index)	7.9%
20	No Inpatient Hospitalization (pre-index)	7.3%

Abbreviations. AMI, acute myocardial infarction; CCS, Clinical Classification System; CVD, cardiovascular disease; GI, gastrointestinal.

eTable 9. Odds Ratios and 95% Confidence Intervals from Logistic Regression Model for Recurrent Cardiovascular-related Hospitalizations (i.e., the Secondary Outcome)

Variable	OR (95% CI)
Cardiac Rehab Use (post-index)	0.86 (0.81-0.91)
AMI (index event)	1.45 (1.34-1.56)
CCS Category: Use of Transportation for Emergency/Non-Emergency Care (pre-index)	1.32 (1.23-1.41)
CCS Category: Diagnostic Cardiac Catheterization (pre-index)	0.80 (0.74-0.87)
Congestive Heart Failure (pre-index)	1.47 (1.38-1.58)
CCS Category: Colostomy, temporary or permanent (pre-index)	1.51 (0.27- 8.49)
Renal Disease (pre-index)	1.32 (1.22-1.43)
CCS Category: Lower gastrointestinal X-ray (pre-index)	2.87 (1.17-7.34)
Diabetes with Complication (pre-index)	1.24 (1.13-1.36)
Low office visit (pre-index)	0.79 (0.74-0.84)
No office visit (pre-index)	0.92 (0.80-1.07)
CCS Category: Radioisotope Pulmonary Scan (pre-index)	1.55 (1.25-1.93)
CCS Category: Arthroplasty Knee (pre-index)	0.83 (0.65-1.06)
Low CVD inpatient charge (pre-index)	0.96 (0.80-1.15)
No CVD inpatient charge (pre-index)	0.72 (0.65-0.81)
CCS Category: Other OR Lower GI Therapeutic Procedures (pre-index)	1.80 (1.05-3.06)
Diabetes (pre-index)	1.16 (1.09-1.24)
Peripheral Vascular Disease (pre-index)	1.21 (1.13-1.29)
CCS Category: Contrast Arteriogram of Femoral and Lower Extremity Arteries (pre-index)	1.54 (0.91-2.64)
CCS Category: Ancillary Services (pre-index)	1.15 (1.07-1.23)
No Inpatient Hospitalization (pre-index)	0.84 (0.76-0.94)

Abbreviations. AMI, acute myocardial infarction; CCS, Clinical Classification System; CI, confidence interval; CVD, cardiovascular disease; GI, gastrointestinal; OR, odds ratio.

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