

## Supplementary Online Content

Fanaroff AC, Peterson ED, Kaltenbach LA, et al. Indirect association of a P2Y12 inhibitor copayment reduction intervention with persistence and adherence with other secondary prevention medications: results from the ARTEMIS cluster-randomized clinical trial. *JAMA Cardiol*. Published online November 13, 2019. doi:10.1001/jamacardio.2019.4408

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

**eMethods:** Covariates included in the propensity model to determine likelihood of intervention

Age, sex, race, ethnicity, insurance payers, prior myocardial infarction (MI), prior percutaneous coronary intervention (PCI), prior coronary artery bypass graft surgery (CABG), prior stroke or transient ischemic attack, prior heart failure, dialysis, peripheral artery disease, hypertension, diabetes, current/recent smoker, weight, transfer in, ST segment elevation MI, P2Y<sub>12</sub> use prior to admission, aspirin use prior to admission, creatinine clearance on presentation, nadir hemoglobin during index hospitalization, multivessel disease, access site for cardiac catheterization, multivessel PCI vs. single vessel PCI vs. no PCI performed, CABG performed during index admission, drug-eluting stent implanted during index admission, history of bleeding or bleeding during index hospitalization, recurrent MI during index hospitalization, stroke during index hospitalization, cardiogenic shock during index hospitalization, heart failure during index hospitalization, cardiac arrest during index hospitalization, cardiac rehab referral, health literacy, angina frequency (by Seattle Angina Questionnaire), Patient Health Questionnaire-2 score > 3, EuroQOL 5 dimension visual analog score, married, employed, college education, financial hardship, missed more than one dose of medication in the last month, hospital bed size, hospital teaching status, government hospital, member of a healthcare network, and hospital surgery capabilities.

**eTable 1:** Baseline characteristics of the study population and the population excluded due to lack of Symphony Health data

	<b>Pharmacy-linked study population (n = 8,373)</b>	<b>No pharmacy linkage (n = 1,729)</b>
<b>Demographics</b>		
Median Age	62 (54, 70)	62 (54, 70)
Male sex	5,664 (67.7)	1,211 (70.0)
Non-white race	990 (11.8)	201 (11.6)
<b>Medical History</b>		
Prior MI	1,713 (20.5)	347 (20.1)
Diabetes	2,734 (32.7)	551 (31.9)
Hypertension	5,763 (68.8)	1,215 (70.3)
Previously missed medication		
Never	4,228 (50.5)	892 (51.6)
1-3 times per month	3,032 (36.2)	609 (35.2)
Once per week or more	824 (9.8)	164 (9.5)
<b>Index hospitalization</b>		
STEMI	3,847 (46.0)	791 (45.7)
PCI performed	7,467 (89.2)	1,536 (88.8)

**eTable 2:** Survey questions about financial hardship affording medications, likelihood of not filling a prescription due to cost, and difficulty getting medical care

<p><b>How difficult is it for you to get medical care when needed?</b></p> <ul style="list-style-type: none"><li><input type="checkbox"/> Extremely difficult</li><li><input type="checkbox"/> Moderately difficult</li><li><input type="checkbox"/> Somewhat difficult</li><li><input type="checkbox"/> Not very difficult</li><li><input type="checkbox"/> Not very difficult at all</li></ul>
<p><b>On a scale of 1 to 5, how would you rate the financial hardship of your current <u>monthly</u> medication costs?</b></p> <ul style="list-style-type: none"><li><input type="checkbox"/> 1 (no hardship at all)</li><li><input type="checkbox"/> 2</li><li><input type="checkbox"/> 3</li><li><input type="checkbox"/> 4</li><li><input type="checkbox"/> 5 (extreme hardship)</li><li><input type="checkbox"/> Don't know</li></ul>
<p><b>In the last 3 months, have you decided not to fill a prescription medication because it was too expensive?</b></p> <ul style="list-style-type: none"><li><input type="checkbox"/> Yes</li><li><input type="checkbox"/> No</li></ul>
<p><b>How much out-of-pocket money do you spend approximately each <u>month</u> to pay for your medication?</b></p> <ul style="list-style-type: none"><li><input type="checkbox"/> Don't have to pay anything</li><li><input type="checkbox"/> \$1-49</li><li><input type="checkbox"/> \$50-99</li><li><input type="checkbox"/> \$100-149</li><li><input type="checkbox"/> \$150-199</li><li><input type="checkbox"/> \$200-299</li><li><input type="checkbox"/> More than \$300</li><li><input type="checkbox"/> Don't know</li></ul>

**eTable 3:** Adjusted intraclass correlation coefficients for persistence and adherence analyses

<b>Outcome</b>	<b>Adjusted intraclass correlation coefficient</b>
Persistence to P2Y <sub>12</sub>	0.044
Adherence to P2Y <sub>12</sub>	0.046
Persistence to Statin	0.011
Adherence to Statin	0.014
Persistence to ACE or ARB	0.004
Adherence to ACE or ARB	0.006
Persistence to Beta Blocker	0.015
Adherence to Beta Blocker	0.015

**eTable 4:** Standardized differences between intervention and usual care arm patients after inverse probability weighting on variables included in the propensity model

Variable	Standardized difference after inverse probability weighting
Age	0.00
Male sex	-0.00
Non-white race	0.00
Hispanic or Latino Ethnicity	0.00
Private health insurance	-0.00
Prior MI	-0.00
Prior PCI	-0.00
Prior CABG	0.00
Prior Stroke/TIA	-0.00
Prior heart failure	0.01
Chronic kidney disease on dialysis	0.00
Peripheral arterial disease	-0.00
Hypertension	0.01
Diabetes	0.01
Current/recent smoker	-0.01
Weight, kg	0.00
Transfer from another acute care facility	-0.00
Presentation with STEMI	0.00
Home P2Y <sub>12</sub> receptor inhibitor prior to index admission	-0.00
Home P2Y <sub>12</sub> receptor inhibitor type prior to index admission	0.18
Home aspirin prior to index admission	-0.00
Estimated creatinine clearance on index admission	-0.00
Nadir hemoglobin value during index admission	-0.01
Multivessel disease	-0.01
Arterial access site for coronary angiography	0.03
PCI performed	-0.01
PCI type performed (single vs. multi-vessel)	0.01

<b>Variable</b>	<b>Standardized difference after inverse probability weighting</b>
Drug-eluting stent (among PCI patients)	-0.00
CABG performed	0.00
In-hospital bleeding or bleeding prior to index admission	-0.00
Recurrent myocardial infarction during index admission	0.00
Stroke during index admission	0.01
Cardiogenic Shock on presentation or during index admission	0.01
Heart failure on presentation or during index admission	0.01
Cardiac arrest on presentation or during index admission	-0.00
Patient-reported difficulty to getting medical care	0.10
Patient-reported having a primary care doctor	-0.02
Patient-reported leaving doctor's office with unanswered questions	0.09
Patient-reported often needing help to read	0.07
Patient reported often having difficulty understanding written information	0.05
Patient-reported confidence filling out health-related forms	0.08
Health Literacy Score	0.04
Health Literacy: Low vs. High	0.01
Self-reported angina symptom frequency	0.08
Nitroglycin use frequency	0.05
Angina frequency score	-0.03
Angina frequency score category	0.00
Cardiac rehabilitation referral at the time of discharge	0.01
Patient-reported little interest or pleasure in doing things	0.05
Patient-reported feeling down, depressed or hopeless	0.01
PHQ2 depression score >3	0.00
EuroQOL-5D mobility	0.04
EuroQOL-5D self-care	0.02
EuroQOL-5D usual activities	0.05
EuroQOL-5D pain/discomfort	0.09
EuroQOL-5D anxiety/depression	0.03

Variable	Standardized difference after inverse probability weighting
U.S. Population-based EQ-5D Index Score	-0.03
EQ-5D visual analogue scale	-0.00
Marital status	0.04
Married	-0.00
Currently employed	0.06
Employed full or part time	-0.01
Highest education	0.05
College or higher education	-0.00
Patient-reported financial hardship obtaining medication	0.11
Financial hardship category	0.04
Patient-reported missed taking medication prior to index admission	0.04
Patient-reported missed >1 dose of medication in last month prior to index admission	0.00



**eTable 5:** Patient reported monthly out of pocket costs

	<b>Copayment intervention (n = 5109)</b>	<b>Usual care (n = 3264)</b>	<b>P value</b>
<b>Baseline</b>			<b>0.85</b>
\$0	751 (12.2%)	508 (12.8%)	
\$1-49	2177 (35.5%)	1443 (36.4%)	
\$50-99	1134 (18.5%)	724 (18.3%)	
≥ \$100	1312 (21.4%)	864 (21.8%)	
Don't know	524 (8.5%)	310 (7.8%)	
<b>12 months</b>			<b>0.06</b>
\$0	503 (10.3%)	317 (10.5%)	
\$1-49	2031 (41.6%)	1196 (39.7%)	
\$50-99	950 (19.5%)	615 (20.4%)	
≥ \$100	1137 (18.5%)	761 (19.2%)	
Don't know	260 (5.3%)	122 (4.1%)	