Transitions of Care Among Patients Undergoing Percutaneous Coronary Intervention for Stable Angina: Insights From the Veterans Affairs Clinical Assessment Reporting and Tracking Program

Stephen W. Waldo, MD; Thomas J. Glorioso, MS; Anna E. Barón, PhD; Jacob A. Doll, MD; Mary E. Plomondon, PhD; P. Michael Ho, MD, PhD

BACKGROUND: Effective transitions from the procedural to outpatient setting are essential to ensure high-quality cardiovascular care across health care systems, particularly among patients undergoing invasive cardiac procedures. We evaluated the association of postprocedural follow-up visits and antiplatelet prescriptions with clinical outcomes among patients undergoing percutaneous coronary intervention for stable angina at community or Veterans Affairs (VA) hospitals.

METHODS AND RESULTS: Patients who actively received care within the VA Healthcare System and underwent percutaneous coronary intervention for stable angina at a community or VA hospital between October 1, 2015, and September 30, 2019, were identified. We compared mortality for patients receiving community or VA care, and among subgroups of community-treated patients by the presence of a postprocedural follow-up visit within 30 days or prescription for antiplatelet (P2Y12) medication within 120 days of the procedure. Among 12,837 patients who survived the first 30 days, 5133 were treated at community hospitals, and 7704 were treated in the VA. Prescriptions for antiplatelet therapy were less common for those treated in the community (85%) compared with the VA at 1 year (95%; hazard ratio [HR], 0.46; 95% CI, 0.44–0.47). Compared with VA-treated patients, the hazards for death were similar for patients treated in the community with a follow-up visit (HR, 1.17; 95% CI, 0.97–1.40) or with a fill for an antiplatelet therapy (HR, 1.08; 95% CI, 0.90–1.30). However, patients treated in the community without a follow-up visit had an 86% (HR, 1.86; 95% CI, 1.40–2.48) increased hazard of death, and those without antiplatelet prescription fill had a 144% increased hazard of death (HR, 2.44; 95% CI, 1.85–3.21) compared with all VA-treated patients.

CONCLUSIONS: Patients treated at community facilities have a decreased chance of receiving antiplatelet prescriptions after percutaneous coronary intervention with a concordant increased hazard of mortality, emphasizing the importance of transitions of care across health care systems when assessing cardiovascular quality.

Key Words: clinical outcomes • coronary artery disease • percutaneous coronary intervention

The ongoing proliferation of coronary interventional programs in the United States, including new availability in outpatient surgical centers, has the potential to provide more convenient and cost-effective care to patients. However, there is also potential for harm for patients who transition across health care systems for their care, especially if they are less likely to receive recommended medical therapies and clinical...
follow-up. The Department of Veterans Affairs (VA) has established and maintained the largest integrated health care system in the United States. Over the past decade, the system has developed mechanisms to improve access to care through its internal health care system as well as expansion of care delivered through partnerships with community care practitioners. These efforts have increased the use of health care in the community for veterans suffering from cardiovascular disease, though community providers have struggled to meet the need for increased capacity. Because of this, patients often receive care in multiple venues emphasizing the importance of ensuring adequate transitions of care from the procedural to outpatient setting across health care systems. 

The expansion of the community care program has resulted in an increase in percutaneous coronary intervention (PCI) for patients with stable angina at community care facilities. The increase in community care use, however, has been accompanied by an increased hazard for mortality among those patients. An early difference in outcomes may be related to the procedure itself, but the observed persistent divergence over time suggests potential deficiencies in the coordination of postprocedural care. With this in mind, the present analysis compared postprocedural follow-up visits and antiplatelet prescriptions among veterans undergoing elective percutaneous revascularization at community and VA hospitals, with associated mortality outcomes.

This analysis provides a contemporary view into difficulties in ensuring optimal transitions of care from the procedural to outpatient setting in the VA, and the potential detrimental outcomes for our patients.

METHODS

The data that support the findings of this study are available from the corresponding author upon reasonable request, though they will be subject to the stringent data privacy rules of the VA Healthcare System and the US government.

Population

The VA Clinical Assessment Reporting and Tracking program is a national quality and safety program for medical specialty care including invasive cardiac procedures within the VA Healthcare System. With the expansion of care to the community over the past 4 years, this program has also been interested in ensuring that the quality of invasive cardiac care for veterans remains unchanged regardless of treatment venue. The present project identified patients actively enrolled in the VA Healthcare System that underwent elective percutaneous revascularization for stable angina between October 1, 2015, and September 30, 2019. A patient was considered actively enrolled in the integrated health care system if they had ≥2 visits to a primary care physician or cardiologist within the VA Healthcare System within 2 years before their procedure and filled at least 1 medication in the VA in the prior year, to have the opportunity to accurately document demographic information and comorbid conditions. Stable angina was defined using clinician reported data for patients treated within the VA Healthcare System and billing codes for those treated at community care hospitals. Patients who underwent revascularization for acute or emergent indications, such as ST-segment-elevation myocardial infarction (International Classification of Diseases, Tenth Revision [ICD-10]: I21.01, I21.02, I21.09, I21.11, I21.19, I21.21, I21.29, I21.3, I22.0, I22.1, I22.2, I22.8, I22.9), non-ST-segment-elevation myocardial infarction (ICD-10: I21.4), or unstable angina (ICD-10: I20.0), were excluded from the analysis to create a comparable cohort for those treated inside and outside the VA. Similarly, patients who underwent a diagnostic procedure in the VA only to undergo revascularization in the community within 1 month (30 days) were also excluded to reduce the chances of higher-risk staged procedures and their associated outcomes to be associated with the given location. Finally, only the index revascularization procedure for each patient was included, and analyses were restricted to those who survived the first 30 days after PCI so postprocedural
care could be tracked. Among the population meeting the inclusion criteria for the study, we limited analyses to patients living in US congressional districts where no more than 4 of 5 patients received PCI in 1 location (VA or community) to ensure that each veteran had a reasonable option for care in either setting. To minimize the potential of residual confounding through study design, we also limited the analytic cohort to those who received the dominant care in a given district, as those receiving nondominant care could have unique characteristics that we could not measure or control for, thus leading to residual confounding. This is particularly true as more patients who received the nondominant care in a given district were treated in community care hospitals, potentially suggesting unique characteristics that may increase their risk for an adverse event and thus bias the results. The analysis was performed in an operational capacity for the Department of Veterans Affairs, and thus institutional review board approval and informed consent was deemed unnecessary by the local authorities.

**Measurements**
Patient and procedural characteristics were derived from the linked electronic medical record and cardiac catheterization report documentation for those treated within the VA Healthcare System. Data for patients treated in the community was derived from the Program Integrity Tool database, which includes administrative claims data with diagnosis and procedure codes for each patient treated to facilitate reimbursement for the community care hospitals. This information was augmented with data from the internal electronic medical record and cardiac catheterization report documentation for those treated at VA facilities. Mortality was ascertained from the VA electronic medical record.

**Outcomes**
All-cause mortality was ascertained for patients treated at VA and community facilities, and further stratified in the community by a postprocedural visit at any site within 30 days, as this is deemed the standard of care. Additional analyses stratified patients in the community by a postprocedural visit at any site within 30 days, as this is deemed the standard of care. This is particularly true as more patients who received the nondominant care in a given district were treated in community care hospitals, potentially suggesting unique characteristics that may increase their risk for an adverse event and thus bias the results. The analysis was performed in an operational capacity for the Department of Veterans Affairs, and thus institutional review board approval and informed consent was deemed unnecessary by the local authorities.

**Statistical Analysis**
Machine learning methods were used to estimate the probability of receiving PCI in the community versus VA. Separate multinomial propensity models estimated location of care as a 3-level predictor, stratifying community procedures among those with and without 30-day post-PCI visits or 120-day P2Y12 fills after the procedure. The “twang” package in R 4.0.3 was used for all propensity models and adjusted for demographic information (age/sex/race/ethnicity/urban versus rural/distance to nearest VA primary care/US Census Division) as well as medical comorbidities (atrial fibrillation/alcohol abuse/heart failure/chronic kidney disease/chronic obstructive lung disease/cerebrovascular disease/depression/diabetes mellitus/family history of coronary artery disease/hypertension/hyperlipidemia/peripheral artery disease/posttraumatic stress disorder/sleep apnea).5,6 Additional covariates representing prior PCI, myocardial infarction, or surgical coronary revascularization (coronary artery bypass graft) were included, as was prior hospitalization within 90 days of the index procedure in attempts to capture overall medical acuity. Inverse probability of treatment weights were calculated and stabilized, providing an average weight of ≈1 for veterans treated in the VA and community to prevent the inflation of power.7 The clinical characteristics of patients treated within the VA Healthcare System were then compared with the same characteristics for those treated at community care hospitals with standardized differences <0.10 indicating good balance across groups. Using the weighted cohort, Kaplan-Meier (KM) curves illustrated the trajectory of mortality rates over time and estimated 1-year rates, while Cox proportional hazards models compared the hazards for mortality, both on the basis of a binary treatment location predictor and separately for 3-level predictors stratifying community patients on the basis of postprocedural care using all patients treated in the VA as the reference group. Sensitivity analyses assessed changes in our primary findings assuming the presence of a hypothetical confounder with specified prevalence and association with the outcome similar to congestive heart failure.8

**RESULTS**

**Population**
Over the study time frame, 12,962 patients met the inclusion criteria and underwent elective PCI in regions with similar access to care across different venues, of which 5200 received this procedure in the community and 7762 received care in the VA. Among the eligible population, 0.7% of VA patients died within the first 30 days of PCI and 1.3% of community care patients (P=0.003). Subsequent analyses were performed on patients who survived 30 days after the procedure,
resulting in 5133 community patients and 7704 patients treated in the VA (Figure 1).

**Patient Characteristics**
The patient characteristics stratified by treatment location are summarized in Table. As shown, the measured patient characteristics are similar across the groups with equivalent ages (69 versus 69) and proportions of patients suffering from heart failure (23% versus 22%), chronic kidney disease (18% versus 16%) and diabetes (51% versus 51%). The proportions of patients who were hospitalized in the 90 days before the index intervention were also comparable (21% versus 20%).

**Transitions of Care**
Transitions of care among patients undergoing elective percutaneous revascularization for stable angina were compared on the basis of treatment location. Diagnostics from the propensity models were assessed, including those that showed adequate balance of covariates across predictor groups. Postprocedure follow-up visits with primary care or cardiovascular providers occurred within 30 days for the majority of patients treated in the VA (KM 30-day rate: 81.7%), with similar rates among those treated in the community (KM 30-day rate, 82.7%; hazard ratio [HR], 0.97; 95% CI, 0.93–1.02). However, prescriptions of antiplatelet therapy (P2Y12) were common among patients treated within the VA (KM 120-day rate, 95.0%) and significantly lower for those treated in the community (KM 120-day rate, 85.3%; HR, 0.46; 95% CI, 0.44–0.47). Lower community P2Y12 fill rates were observed across the full 120-day period, including at 30 days (VA, 82.4%; community, 61.5%; difference, 20.9%; 95% CI, 19.2%–22.6%) and 60 days (VA, 88.7%; community,
Compared with patients treated in the VA, community patients had lower rates of P2Y12 prescriptions whether they received (KM 120-day rate, 87.4%) or did not receive (KM 120-day rate, 75.1%) follow-up visits within 30 days (risk difference $P$ values <0.01, accounting for censoring).

### Clinical Outcomes

Overall, a Cox proportional hazards model for death demonstrated a 30% (HR, 1.30; 95% CI, 1.10–1.55) increase in the hazard for mortality among patients treated in the community who survived the first 30 days after a procedure (KM 1-year rate, 5.9%), compared with those treated in the VA (KM 1-year rate, 4.7%; difference, 1.2%; 95% CI, 0.3%–2.2%) (Figure 2). There were significant differences in mortality among

| Table. Demographic and Clinical Characteristics of Patients Before Weighting Undergoing Percutaneous Coronary Intervention for Stable Angina, Stratified by Treatment Location |
|---|---|---|---|
| Demographics | VA | Community | Std Diff |
| n=7704 | n=5133 | |
| Age, y | 68.5 (8.1) | 68.5 (8.5) | 0.006 |
| Male | 0.982 | 0.978 | 0.031 |
| Race | | | |
| White | 0.845 | 0.869 | 0.071 |
| Black | 0.103 | 0.066 | 0.136 |
| Other* | 0.022 | 0.028 | 0.039 |
| Unknown | 0.035 | 0.043 | 0.040 |
| Hispanic | 0.028 | 0.036 | 0.046 |
| Urban | 0.538 | 0.478 | 0.119 |
| Distance to VA primary care, miles | 17.9 (16.0) | 20.8 (19.2) | 0.162 |
| Census division | | | |
| East North Central | 0.226 | 0.106 | 0.328 |
| East South Central | 0.093 | 0.107 | 0.045 |
| Middle Atlantic | 0.035 | 0.080 | 0.196 |
| Mountain | 0.058 | 0.123 | 0.229 |
| New England | 0.039 | 0.036 | 0.015 |
| Pacific | 0.066 | 0.068 | 0.005 |
| South Atlantic | 0.245 | 0.205 | 0.096 |
| West North Central | 0.085 | 0.122 | 0.119 |
| West South Central | 0.153 | 0.154 | 0.003 |
| Medical history | | | |
| Atrial fibrillation | 0.157 | 0.171 | 0.039 |
| Alcohol abuse | 0.048 | 0.040 | 0.038 |
| Congestive heart failure | 0.227 | 0.223 | 0.009 |
| Chronic kidney disease | 0.176 | 0.163 | 0.035 |
| Chronic obstructive pulmonary disease | 0.220 | 0.276 | 0.130 |
| Cerebrovascular disease | 0.127 | 0.172 | 0.127 |
| Depression | 0.125 | 0.151 | 0.076 |
| Diabetes | 0.513 | 0.511 | 0.004 |
| Hypertension | 0.859 | 0.810 | 0.033 |
| Hyperlipidemia | 0.806 | 0.800 | 0.015 |
| Peripheral artery disease | 0.156 | 0.187 | 0.081 |
| Prior myocardial infarction | 0.156 | 0.213 | 0.149 |
| Posttraumatic stress disorder | 0.099 | 0.134 | 0.111 |
| Obstructive sleep apnea | 0.281 | 0.265 | 0.035 |
| Prior procedures | | | |
| Prior coronary artery bypass surgery | 0.155 | 0.177 | 0.061 |

(Continued)
subgroups of community-treated patients defined by follow-up status and P2Y12 prescription. Patients treated in the community with a follow-up visit had a similar hazard for death (HR, 1.17; 95% CI, 0.97–1.40) compared with those treated in the VA. However, patients treated in the community who did not undergo a postprocedural follow-up visit within 30 days had an 86% (HR, 1.86; 95% CI, 1.40–2.48) increased hazard of death compared with those treated in the VA. Similarly, patients treated in the community who filled an antiplatelet prescription had a similar hazard for death (HR, 1.08; 95% CI, 0.90–1.30). However, those without a fill for antiplatelet therapy within 120 days of the index procedure had a 144% (HR, 2.44; 95% CI, 1.85–3.21) increased hazard of death compared with VA-treated patients (Figure 3). To allow for our inability to capture P2Y12 fills at private pharmacies, we removed community patients without any VA medication fills within 120 days after the procedure and again observed higher mortality for community patients without fills for antiplatelet agents (HR, 2.01; 95% CI, 1.46–2.76). A more granular comparison of antiplatelet prescriptions and follow-up visits across treatment venues is reproduced in Figure S1, reinforcing the worsened outcomes among patients treated in the community without a follow-up visit or prescription for antiplatelet therapy.

Sensitivity Analysis for Unmeasured Confounding

Using a hypothetical confounder with a prevalence similar to heart failure (≈20%) in the VA, a prevalence 10% higher for community patients, and a similar association with death as heart failure (HR, 2.0), the HRs for death in the community among those without a follow-up visit (HR, 1.72; 95% CI, 1.29–2.229) or antiplatelet prescription (HR, 2.25; 95% CI, 1.71–2.97) were attenuated but remain significant. This would suggest that the differences in prevalence and association with mortality for an unmeasured confounder would need to exceed these reference values to negate the observed discrepancies.

**DISCUSSION**

The present analysis confirms that veterans undergoing elective percutaneous coronary revascularization in

![Figure 3. All cause mortality among propensity weighted study population undergoing elective PCI for stable angina stratified by treatment venue (Community or VA).](image-url)

(A), depicts outcomes according to completion of a post-procedural follow-up visit and (B) depicts outcomes according to a prescription for anti-platelet medication. PCI indicates percutaneous coronary intervention; and VA, Veterans Affairs.
the community have an increased hazard of mortality compared with those treated in the integrated VA Healthcare System. Further, the data demonstrate that the immediate increase in mortality is accompanied by a continued worsening in outcomes over time suggesting possible deficiencies in postprocedural care. Stratified analyses demonstrate that patients treated at community care facilities with appropriate postprocedural follow-up have equivalent outcomes to those treated in the integrated health care system. In contrast, patients treated in the community without 1-month follow-up visits or prescriptions for appropriate antiplatelet therapy have significantly worse outcomes. Given the increasing fracturing of cardiovascular care in the United States, these data have implications as patients transition from the procedural to outpatient setting across health care systems.

Coordinating care during the transition from the inpatient to outpatient setting is complex, particularly when this transition spans multiple health care systems with different electronic health records and quality control apparatuses. Accordingly, previous research has demonstrated that veterans obtaining care both inside and outside the VA Healthcare System can lead to waste and inefficiencies, with associated reduction in the quality of care received and attendant worse outcomes. Some have suggested that improved outcomes among patients treated solely within the integrated health care system are primarily attributable to improvements in care coordination. This is supported by data from veterans surveyed during prior implementations of the community care program, demonstrating dissatisfaction with the care coordination available in the community. The present study builds on these findings among patients undergoing elective coronary intervention, demonstrating a similar proportion of patients undergoing appropriate follow-up within the community and the VA. However, a small proportion of patients treated in the community do not undergo appropriate follow-up, thus hindering an appropriate transition of care that facilitates a positive outcome.

Professional society guidelines have emphasized the importance of a postprocedural clinic visit to assess compliance with secondary prevention therapies after PCI. Consistent with this, we demonstrated that the majority (>80%) of all revascularized patients had a clinic visit within 30 days of the procedure regardless of treatment venue. However, postprocedural prescriptions for antiplatelet therapies were markedly different across locales, with a 54% decreased hazard of receiving these therapies if a patient was treated at a community facility. Deficiencies in coordinating the transition of care across health care systems could have accounted for a reduction in the fill of critical medications. This is supported by the significantly lower prescription fills for patients who did not receive a postprocedural visit, highlighting those who could be lost to follow-up when moving between health care systems. This could also serve as a surrogate for other evidence-based and guideline-indicated therapies for stable ischemic heart disease for those without visits. Concordant with this, patients treated in the community without a fill for antiplatelet therapies had a 144% increased hazard of death compared with all patients treated within the VA. As access to community care expands under the most recent legislation, there must also be an expansion of mechanisms to coordinate care and assure its quality.

Clinical outcomes following elective procedures do not occur in a vacuum and require the coordination of care between the procedural and outpatient setting, which can be significantly more complex when it occurs across health care systems. The quality of invasive procedures thus depends upon a well-defined system to ensure that patients receive adequate follow-up and guideline-concordant prescriptions regardless of treatment venue. This remains relevant for all nonveteran and veteran patients alike, given the significant movement of patients across different health care systems nationwide. Mechanisms to follow patients and ensure that they are receiving guideline-concordant care after a procedure are inconsistently available in the community. Professional society registries concentrating on procedural quality often focus on the procedure itself, with incomplete mechanisms to follow all patients longitudinally thereafter. The Clinical Assessment Reporting and Tracking Program serves to monitor and enhance the quality of medical specialty care within the VA Healthcare System, with a focus on patients who have undergone invasive cardiac procedures. This program now captures information about appropriate follow-up visits and VA medication prescriptions after a veteran undergoes percutaneous revascularization regardless of treatment venue, increasing the overall quality of care.

Limitations

The present analysis should be interpreted in the context of several limitations. Data were derived from clinical documentation for care provided within the VA Healthcare System and administrative billing data from community care hospitals. Administrative billing data provide diagnoses and procedural codes but have limited additional clinical information. Medications filled at private pharmacies may not be captured and is more limited for community care patients, though a sensitivity analysis using only community patients with post-PCI VA fills of other medications reinforced worse outcomes for patients without P2Y12 fills. A propensity-weighted cohort was developed to balance measured demographic and clinical characteristics between
groups, though it is possible that other unmeasured differences between patients in the community and those treated internally exist and are not accounted for. The cause of death is not uniformly available, and thus differences in cardiovascular and noncardiovascular death cannot be accurately ascertained. Finally, the patient population treated by the VA is unique, and thus the findings are relevant only to veterans receiving care paid for by the federal government at community care or VA hospitals.

CONCLUSIONS

Veterans treated in the community have a decreased chance of receiving antiplatelet prescriptions after PCI, with a concordant increased hazard of mortality emphasizing the importance of transitions of care across health care systems when assessing cardiovascular quality.

ARTICLE INFORMATION

Received December 7, 2021; accepted January 11, 2022.

Affiliations

VHA Office of Quality and Patient Safety, Washington, DC (S.W.W., T.J.G., M.E.P.); Department of Medicine, Rocky Mountain Regional VA Medical Center, Aurora, CO (S.W.W., P.M.H.); Department of Medicine, Division of Cardiology, University of Colorado School of Medicine, Aurora, CO (S.W.W., P.M.H.); Department of Biostatistics and Informatics, Colorado School of Public Health, University of Colorado Anschutz Medical Campus, Aurora, CO (A.E.B.); Puget Sound VA Medical Center, Seattle, WA (J.A.D.); and Department of Medicine, University of Washington, Seattle, WA (J.A.D.).

Sources of Funding

None.

Disclosures

Dr Waldo has received unrelated investigator-initiated research support from Abiomed, Cardiovascular Systems Incorporated, Janssen Pharmaceuticals, the National Institutes of Health and VA Health Services Research & Development.

The views expressed in this article are those of the authors and do not necessarily reflect the position or policy of the Department of Veterans Affairs or the US government.

Supplemental Material

Figure S1

REFERENCES

1. Giroir BP, Willensky GR. Reforming the Veterans Health Administration—beyond palliation of symptoms. N Engl J Med. 2015;373:1693–1695. doi: 10.1056/NEJMp1511438

2. Waldo SW, Glorioso TJ, Barón AE, Pomondon ME, Valle JA, Schofield R, Ho PM. Outcomes among patients undergoing elective percutaneous coronary intervention at Veterans Affairs and community care hospitals. J Am Coll Cardiol. 2020;76:1112–1116. doi: 10.1016/j.jacc.2020.05.086

3. Tanielian T, Farmer C, Burns R, Dufuy E, Messan SC. Ready or Not? Assessing the Capacity of New York State Healthcare Providers to Meet the Needs of Veterans. Santa Monica, CA: RAND Corporation; 2018.

4. Miller LB, Sjoberg H, Mayberry A, McCreight MS, Ayette RA, Battaglia C. The advanced care coordination program: a protocol for improving transitions of care for dual-use veterans from community emergency departments back to the Veterans Health Administration (VA) primary care. BMC Health Serv Res. 2019;19:734. doi: 10.1186/s12913-019-4582-3

5. Cofala M, Ridgeway G, McCaffrey D, Morral A, Griffin B, Burgette L. Toolkit for weighting and analysis of nonequivalent groups. ResearchGate version 2.0. 2021. Available at: https://CRAN.R-project.org/package=twang. Accessed October 5, 2021.

6. R Core Team. R: A Language and Environment for Statistical Computing. R Foundation for Statistical Computing. Vienna, Austria. https://www.R-project.org/

7. Austin PC, Stuart EA. Moving towards best practice when using inverse probability of treatment weighting (IPTW) using the propensity score to estimate causal treatment effects in observational studies. Stat Med. 2015;34:3661–3679. doi: 10.1002/sim.6607

8. Lin DY, Psaty BM, Kronmal RA. Assessing the sensitivity of regression results to unmeasured confounders in observational studies. Biometrics. 1998;54:948–963. doi: 10.2307/2533848

9. Gellad WF, Zhao X, Thorpe CT, Mor MK, Good CB, Fine MJ. Dual use of Department of Veterans Affairs and Medicare benefits and use of test strips in veterans with type 2 diabetes mellitus. JAMA Intern Med. 2015;175:26–34. doi: 10.1001/jamainternmed.2014.5405

10. Helmer D, Sambamoorthi U, Shen Y, Tseng C-L, Rajan M, Tiwari A, Maney M, Pogach L. Opting out of an integrated healthcare system: dual-system use is associated with poorer glycemic control in veterans with diabetes. Prim Care Diabetes. 2019;2:73–80. doi: 10.1016/j.pcd.2008.02.004

11. Nuti SV, Qin L, Rumsfeld JS, Ross JS, Masoudi FA, Normand S-LT, Murugiah K, Bernheim SM, Suter LG, Krumholz HM. Association of admission to Veterans Affairs hospitals vs non-Veterans Affairs hospitals with mortality and readmission rates among older men hospitalized with acute myocardial infarction, heart failure, or pneumonia. JAMA. 2016;315:582–592. doi: 10.1001/jama.2016.0278

12. Jones AL, Fine MJ, Stone RA, Gao S, Hausmann LRM, Burkitt KH, Taber PA, Switzer GE, Good CB, Vanneman ME, et al. Veteran satisfaction with early experiences of health care through the Veterans Choice program: a concurrent mixed methods study. J Gen Intern Med. 2019;34:1925–1933. doi: 10.1007/s11606-019-05116-1

13. Levine GN, Bates ER, Blankenship JC, Bailey SR, Bittl JA, Cercek B, Chambers CE, Ellis SG, Gutyar RA, Hollenberg SM, et al. 2011 ACCF/AHA/SCAI guideline for percutaneous coronary intervention: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines and the Society for Cardiovascular Angiography and Interventions. Circulation. 2011;124:e574–e651. doi: 10.1161/CIR.0b013e3182b3a622

14. Department of Veterans Affairs. Expanded access to non-VA care through the Veterans Choice program. Final rule. Fed Regist. 2015;80:66419–66429.

15. Bhatt DL, Drozda JP, Shahian DM, Chan PS, Fonarow GC, Heidenreich PA, Jacobs JP, Masoudi FA, Peterson ED, Weihe KF. ACC/AHA/STS statement on the future of registries and the performance measurement enterprise: a report of the American College of Cardiology/American Heart Association Task Force on Performance Measures and the Society of Thoracic Surgeons. J Am Coll Cardiol. 2015;66:2230–2245. doi: 10.1016/j.jacc.2015.07.010
Figure S1. All-cause mortality among propensity weighted study population undergoing elective percutaneous coronary intervention for stable angina, stratified by treatment venue (community care or VA) and transitions of care, either post procedural follow-up visit (A) or antiplatelet prescription (B).