

Symptomatic HIV infection and in-hospital outcomes in acute myocardial infarction undergoing percutaneous coronary intervention: an insight of national inpatients sample

Supplementary Table S1 International Classification of Diseases, Ninth Edition, Clinical Modification (ICD-9--CM) codes used to identify the baseline comorbidities, procedures, and in-hospital outcomes

Variable	Codes
Study population	
HIV status	
Asymptomatic HIV	V08
Symptomatic HIV	042
Smoking	305.1, V15.82
Comorbidity	
Previous Coronary Artery Bypass Graft	V45.81
Hypertension	401.0, 401.1, 401.9
Hyperlipidemia	272.4
Diabetes Mellitus	250.00-99
Congestive Heart Failure	428.20-49
Chronic Obstructive Pulmonary Disease	496
Weight Loss	783.21
Chronic Kidney Disease	585.1-9
Ischemic Stroke	V1254
AMI type	
ST-segment elevation myocardial infarction	410.0x, 410.1x, 410.2x, 410.3x, 410.4x, 410.5x, 410.6x, 410.8x, 410.9x
Non-ST-segment elevation myocardial infarction	410.7x
Outcomes	
Cardiac shock	785.51
Bleeding	998.11, 998.12
Acute kidney injury	584.5-9

Supplemental Table S2 Univariate analysis of the risk factors of in-hospital mortality and outcomes in AMI patients undergoing PCI grouped by HIV status

Characteristic	In-hospital mortality OR, (95%CI) P-value	Acute Kidney Injury OR, (95%CI) P-value	Cardiac Shock OR, (95%CI) P-value	Bleeding OR, (95%CI) P-value	Length of Hospital Stay β , (95%CI) P-value	Number of ICD-9-CM Procedures on this discharge β , (95%CI) P-value
HIV status						
HIV-negative	1.0	1.0	1.0	1.0	0	0
Asymptomatic HIV	0.33 (0.16, 0.70) 0.0036	0.63 (0.47, 0.83) 0.0012	0.46(0.28, 0.75) 0.0019	0.62(0.41, 0.93) 0.0222	-0.82 (-1.05, -0.59) <0.0001	-0.06 (-0.20, 0.07) 0.3611
Symptomatic HIV	2.83 (2.27, 3.54) <0.0001	1.30 (1.09, 1.54) 0.0030	1.31(1.02, 1.68) 0.0354	0.88(0.66, 1.18) 0.4059	1.70 (1.50, 1.91) <0.0001	0.42 (0.30, 0.55) <0.0001
Age (Survey-weighted mean (95% CI))	1.06 (1.06, 1.06) <0.0001	1.05(1.05, 1.05) <0.0001	1.02(1.02, 1.02) <0.0001	1.01(1.01, 1.01) <0.0001	0.05(0.05, 0.05) <0.0001	0.00(0.00, 0.00) <0.0001
Female (%)	1.74 (1.67, 1.81) <0.0001	1.48(1.45, 1.51) <0.0001	1.32(1.28, 1.36) <0.0001	1.69(1.64, 1.75) <0.0001	0.70(0.67, 0.72) <0.0001	-0.02 (-0.04, -0.01) 0.0010
RACE (%)						
Caucasian	1.0	1.0	1.0	1.0	0	0
African American	0.65(0.59, 0.71) <0.0001	1.52 (1.46, 1.58) <0.0001	0.61(0.56, 0.66) <0.0001	0.77(0.72, 0.83) <0.0001	0.27 (0.23, 0.32) <0.0001	-0.04 (-0.07, -0.02) 0.0010
Other	1.01 (0.95, 1.07) 0.8138	1.21 (1.17, 1.25) <0.0001	0.97(0.92, 1.01) 0.1547	1.07(1.03, 1.12) 0.0019	0.29 (0.26, 0.32) <0.0001	0.31 (0.29, 0.33) <0.0001
Primary expected payer (%)						
Medicare	1.0	1.0	1.0	1.0	0	0
Medicaid	0.41(0.37, 0.45) <0.0001	0.60 (0.57, 0.62) <0.0001	1.33(1.26, 1.41) <0.0001	0.82(0.77, 0.87) <0.0001	-0.19 (-0.23, -0.15) <0.0001	0.25 (0.23, 0.28) <0.0001
Private insurance	0.29 (0.27, 0.31) <0.0001	0.31(0.30, 0.32) <0.0001	0.61(0.59, 0.64) <0.0001	0.91(0.88, 0.94) <0.0001	-1.17 (-1.19, -1.14) <0.0001	-0.04(-0.06, -0.03) <0.0001
Other	0.53 (0.50, 0.56) <0.0001	0.65 (0.63, 0.67) <0.0001	1.11(1.06, 1.16) <0.0001	0.53(0.51, 0.56) <0.0001	-1.03 (-1.07, -0.99) <0.0001	0.03 (0.01, 0.05) 0.0089
Median household income (%)						
1st quartile	1.0	1.0	1.0	1.0	0	0
2nd quartile	0.93 (0.88, 0.98) 0.0047	0.98 (0.95, 1.01) 0.1991	1.02(0.97, 1.06) 0.4717	1.01(0.96, 1.05) 0.8093	-0.15 (-0.18, -0.12) <0.0001	-0.06 (-0.08, -0.05) <0.0001
3rd quartile	0.74 (0.70, 0.79) <0.0001	0.93 (0.90, 0.95) <0.0001	1.15(1.10, 1.20) <0.0001	1.03(0.98, 1.07) 0.2215	-0.18(-0.21, -0.15) <0.0001	0.09 (0.07, 0.10) <0.0001
4th quartile	0.85 (0.80, 0.90) <0.0001	0.73 (0.70, 0.75) <0.0001	0.98(0.94, 1.03) 0.4860	0.92(0.88, 0.96) 0.0004	-0.31(-0.34, -0.28) 0.0001	0.20 (0.18, 0.21) <0.0001
smoking (%)	0.41 (0.39, 0.43) <0.0001	0.45 (0.44, 0.47) <0.0001	0.78 (0.75, 0.80) <0.0001	0.75 (0.72, 0.77) <0.0001	-0.89 (-0.91, -0.87) <0.0001	0.05 (0.03, 0.06) <0.0001
Comorbidity (%)						
Previous Coronary Artery Bypass Graft	0.55 (0.49, 0.63) <0.0001	1.47 (1.40, 1.54) <0.0001	0.44 (0.39, 0.49) <0.0001	0.48 (0.43, 0.53) <0.0001	0.09 (0.04, 0.14) 0.0009	-0.21 (-0.24, -0.18) <0.0001

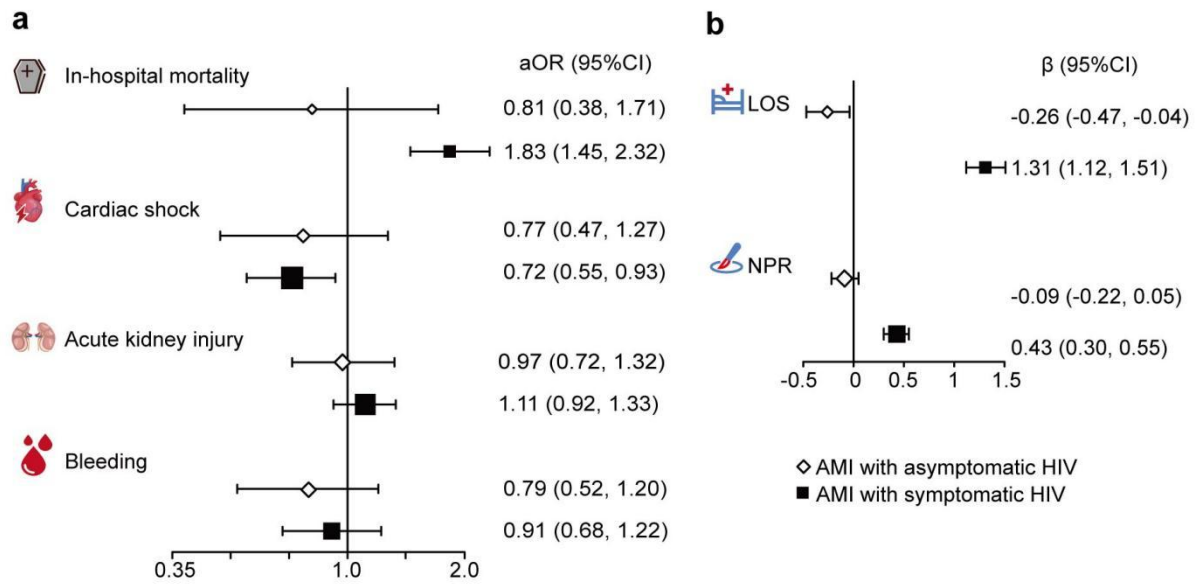
Hypertension	0.50(0.48, 0.52) <0.0001	0.31 (0.30, 0.32) <0.0001	0.46(0.45, 0.48) <0.0001	0.73(0.70, 0.75) <0.0001	-0.83(-0.85, -0.81) <0.0001	-0.00 (-0.02, 0.01) 0.5215
Hyperlipidemia	0.27 (0.25, 0.28) <0.0001	0.81 (0.79, 0.83) <0.0001	0.48(0.47, 0.50) <0.0001	0.75(0.72, 0.77) <0.0001	-0.78 (-0.80, -0.75) <0.0001	-0.17(0.15, 0.18) <0.0001
Diabetes Mellitus	0.86 (0.83, 0.90) <0.0001	2.01 (1.96, 2.05) <0.0001	0.97(0.94, 1.00) 0.0797	0.74(0.72, 0.77) <0.0001	0.42 (0.39, 0.44) <0.0001	0.11 (0.10, 0.12) <0.0001
Congestive Heart Failure	2.62 (2.51, 2.74) <0.0001	6.16 (6.02, 6.30) <0.0001	4.40(4.26, 4.54) <0.0001	1.01(0.97, 1.05) 0.6528	2.86 (2.83, 2.89) <0.0001	0.43 (0.41, 0.44) <0.0001
Chronic Obstructive Pulmonary Disease	1.33(1.25, 1.42) <0.0001	1.34 (1.29, 1.39) <0.0001	1.71(1.63, 1.80) <0.0001	0.87(0.82, 0.92) <0.0001	0.64 (0.60, 0.67) <0.0001	0.08 (0.06, 0.10) <0.0001
Weight Loss	1.14 (0.68, 1.91) 0.6133	1.30 (1.00, 1.69) 0.0478	0.92(0.59, 1.44) 0.7294	0.77(0.48, 1.23) 0.2800	0.73 (0.42, 1.04) <0.0001	0.09 (-0.10, 0.28) 0.3323
Chronic Kidney Disease	1.76 (1.67, 1.86) <0.0001	10.21 (9.97, 10.47) <0.0001	1.86(1.78, 1.94) <0.0001	1.03(0.98, 1.09) 0.1948	2.02 (1.98, 2.06) <0.0001	0.57 (0.55, 0.60) <0.0001
Ischemic Stroke	0.75 (0.66, 0.85) <0.0001	1.94 (1.85, 2.03) <0.0001	0.99 (0.91, 1.08) 0.8975	0.67 (0.61, 0.75) <0.0001	0.22 (0.16, 0.28) <0.0001	0.37 (0.34, 0.41) <0.0001
AMI type (%)						
ST-segment elevation myocardial infarction	1.0	1.0	1.0	1.0	0	0
Non-ST-segment elevation myocardial infarction	0.40 (0.38, 0.42) <0.0001	1.48 (1.45, 1.52) <0.0001	0.29(0.28, 0.30) <0.0001	0.75(0.73, 0.77) <0.0001	-0.04 (-0.06, -0.02) 0.0003	-0.33 (-0.35, -0.32) <0.0001

Supplemental Table S3 HIV status and in-hospital mortality and outcomes in AMI patients who underwent PCI in different subgroups

Exposure	HIV status	In-hospital mortality OR, (95%CI) <i>P</i> -value	Acute Kidney Injury OR, (95%CI) <i>P</i> -value	Cardiac Shock OR, (95%CI) <i>P</i> -value	Length of Hospital Stay β , (95%CI) <i>P</i> -value	Number of ICD-9-CM Procedures on this discharge β , (95%CI) <i>P</i> -value
Age≤50	Asymptomatic HIV	1.22(0.30, 4.93) 0.7774	1.20 (0.66, 2.19) 0.5576	0.75(0.31, 1.82) 0.5288	0.26(-0.02, 0.54) 0.0730	-0.04(-0.28, 0.19) 0.7145
	Symptomatic HIV	32.04(14.29, 71.87) <0.0001	1.41 (0.34, 5.82) 0.6339	1.99(0.48, 8.20) 0.3413	0.61(-0.08, 1.30) 0.0809	0.63(0.07, 1.19) 0.0273
Age>50	Asymptomatic HIV	0.30(0.12, 0.72) 0.0069	0.63 (0.46, 0.87) 0.0051	0.42(0.23, 0.77) 0.0047	-1.12(-1.40, -0.83) <0.0001	-0.05(-0.22, 0.11) 0.5231
	Symptomatic HIV	2.32(1.84, 2.93) <0.0001	1.17 (0.98, 1.39) 0.0787	1.22(0.94, 1.57) 0.1314	1.64(1.42, 1.86) <0.0001	0.40(0.27, 0.53) <0.0001
Male	Asymptomatic HIV	0.40(0.18, 0.89) 0.0247	0.74(0.55, 1.00) 0.0472	0.43(0.24, 0.76) 0.0034	-0.66(-0.90, -0.43) <0.0001	-0.06(-0.21, 0.08) 0.3993
	Symptomatic HIV	3.58(2.73, 4.70) <0.0001	1.54(1.25, 1.89) <0.0001	1.59(1.18, 2.13) 0.0021	1.65(1.40, 1.89) <0.0001	0.36(0.21, 0.51) <0.0001
Female	Asymptomatic HIV	0.30(0.04, 2.12) 0.2260	0.42(0.17, 1.03) 0.0584	0.86(0.32, 2.34) 0.7706	-0.67(-1.40, 0.06) 0.0710	-0.13(-0.55, 0.30) 0.5542
	Symptomatic HIV	1.96(1.32, 2.91) 0.0009	0.96(0.71, 1.31) 0.8169	0.88(0.54, 1.43) 0.6164	1.82(1.44, 2.21) <0.0001	0.55(0.33, 0.78) <0.0001
Race (%)						
Caucasian	Asymptomatic HIV	0.51(0.19, 1.37) 0.1840	0.65(0.41, 1.05) 0.0774	0.62(0.31, 1.24) 0.1774	-0.58(-0.96, -0.21) 0.0024	0.03(-0.20, 0.27) 0.7919
	Symptomatic HIV	2.65(2.07, 3.38) <0.0001	1.21(1.00, 1.47) 0.0554	1.29(0.99, 1.68) 0.0634	1.48(1.26, 1.70) <0.0001	0.39(0.26, 0.53) <0.0001
Other	Asymptomatic HIV	0.24(0.08, 0.76) 0.0145	0.52(0.36, 0.73) 0.0002	0.41(0.20, 0.82) 0.0116	-1.14(-1.45, -0.82) <0.0001	-0.25(-0.42, -0.08) 0.0050
	Symptomatic HIV	4.11(2.33, 7.25) <0.0001	2.11(1.44, 3.10) 0.0001	1.33(0.62, 2.84) 0.4574	3.14(2.53, 3.74) <0.0001	0.70(0.36, 1.03) <0.0001
Primary expected payer (%)						
Medicare	Asymptomatic HIV	0.06(0.01, 0.44) 0.0053	0.37(0.24, 0.57) <0.0001	0.11(0.03, 0.42) 0.0015	-1.53(-1.88, -1.18) <0.0001	0.05(-0.15, 0.24) 0.6363
	Symptomatic HIV	1.91(1.41, 2.60) <0.0001	1.21(0.97, 1.49) 0.0854	1.34(0.96, 1.87) 0.0907	1.35(1.07, 1.64) <0.0001	0.31(0.15, 0.47) <0.0001
Medicaid	Asymptomatic HIV	1.35(0.33, 5.49) 0.6740	0.75(0.33, 1.71) 0.4915	0.53(0.17, 1.68) 0.2828	-0.90(-1.70, -0.10) 0.0282	-0.28(-0.71, 0.14) 0.1874
	Symptomatic HIV	5.40(1.95, 14.98) 0.0012	0.96(0.35, 2.66)	0.68(0.17, 2.79)	1.44(0.33, 2.54)	0.69(0.11, 1.28) 0.0197

			0.9409	0.5926	0.0111	
Private insurance	Asymptomatic HIV	0.53(0.07, 3.77) 0.5246	1.07(0.53, 2.18) 0.8421	0.87(0.32, 2.34) 0.7839	0.01(-0.33, 0.35) 0.9674	-0.10(-0.37, 0.18) 0.4805
	Symptomatic HIV	10.01(6.31, 15.89) <0.0001	2.06(1.25, 3.37) 0.0043	2.55(1.46, 4.48) 0.0010	1.83(1.51, 2.15) <0.0001	0.75(0.49, 1.01) <0.0001
Other	Asymptomatic HIV	0.89(0.28, 2.78) 0.8377	1.01(0.59, 1.70) 0.9852	0.86(0.40, 1.83) 0.6989	0.10(-0.51, 0.70) 0.7585	-0.57(-1.01, -0.13) 0.0110
	Symptomatic HIV	1.99(1.17, 3.41) 0.0116	0.81(0.54, 1.21) 0.3008	0.75(0.43, 1.31) 0.3133	2.00(1.13, 2.88) <0.0001	0.29(-0.35, 0.92) 0.3752
Non-smoking	Asymptomatic HIV	0.24(0.08, 0.75) 0.0143	0.43(0.27, 0.67) 0.0002	0.29(0.12, 0.71) 0.0065	-1.24(-1.63, -0.84) <0.0001	0.24(0.03, 0.45) 0.0254
	Symptomatic HIV	2.10(1.58, 2.79) <0.0001	1.05(0.85, 1.30) 0.6473	1.09(0.79, 1.52) 0.5973	1.66(1.36, 1.96) <0.0001	0.42(0.26, 0.59) <0.0001
smoking	Asymptomatic HIV	0.62(0.23, 1.67) 0.3454	1.15(0.80, 1.65) 0.4500	0.66(0.36, 1.19) 0.1656	-0.25(-0.47, -0.03) 0.0234	-0.32(-0.50, -0.14) 0.0005
	Symptomatic HIV	5.29(3.67, 7.62) <0.0001	1.97(1.46, 2.64) <0.0001	1.73(1.17, 2.55) 0.0057	1.69(1.44, 1.93) <0.0001	0.43(0.23, 0.63) <0.0001
Comorbidity (%)						
Non- Hypertension	Asymptomatic HIV	0.27(0.10, 0.73) 0.0094	0.49(0.34, 0.69) <0.0001	0.28(0.13, 0.58) 0.0007	-1.22(-1.61, -0.82) <0.0001	-0.45(-0.65, -0.25) <0.0001
	Symptomatic HIV	3.50(2.63, 4.65) <0.0001	1.54(1.25, 1.91) <0.0001	1.57(1.15, 2.16) 0.0049	1.99(1.62, 2.37) <0.0001	0.73(0.54, 0.91) <0.0001
Hypertension	Asymptomatic HIV	0.39(0.13, 1.23) 0.1080	0.81(0.51, 1.30) 0.3847	0.75(0.39, 1.45) 0.3952	-0.55(-0.81, -0.30) <0.0001	0.32(0.13, 0.52) 0.0011
	Symptomatic HIV	2.24(1.55, 3.25) <0.0001	1.07(0.78, 1.46) 0.6750	1.06(0.69, 1.62) 0.7940	1.37(1.15, 1.60) <0.0001	0.16(-0.01, 0.33) 0.0681
Non-Hyperlipidemia	Asymptomatic HIV	0.48(0.21, 1.07) 0.0709	0.78(0.52, 1.17) 0.2261	0.57(0.31, 1.08) 0.0838	-0.81(-1.29, -0.34) 0.0008	-0.07(-0.32, 0.17) 0.5580
	Symptomatic HIV	1.93(1.47, 2.54) <0.0001	1.06(0.84, 1.34) 0.6005	1.04(0.76, 1.42) 0.7956	1.55(1.22, 1.88) <0.0001	0.52(0.35, 0.69) <0.0001
Hyperlipidemia	Asymptomatic HIV	0.17(0.02, 1.18) 0.0723	0.55(0.37, 0.82) 0.0029	0.40(0.18, 0.89) 0.0243	-0.67(-0.88, -0.47) <0.0001	-0.09(-0.26, 0.07) 0.2770
	Symptomatic HIV	5.13(3.48, 7.56) <0.0001	1.62(1.25, 2.10) 0.0002	1.64(1.07, 2.52) 0.0227	1.70(1.46, 1.94) <0.0001	0.33(0.14, 0.53) 0.0006
Non-Diabetes Mellitus	Asymptomatic HIV	0.32(0.13, 0.77) 0.0111	0.67(0.47, 0.97) 0.0345	0.52(0.30, 0.90) 0.0200	-0.65(-0.92, -0.37) <0.0001	-0.29(-0.44, -0.13) 0.0003
	Symptomatic HIV	3.23(2.53, 4.11) <0.0001	1.67(1.37, 2.05) <0.0001	1.35(1.01, 1.80) 0.0409	2.01(1.76, 2.26) <0.0001	0.56(0.41, 0.72) <0.0001
Diabetes Mellitus	Asymptomatic HIV	0.36(0.09, 1.44) 0.1479	0.59(0.38, 0.92)	0.30(0.10, 0.93)	-1.21(-1.63, -0.78)	0.47(0.21, 0.73) 0.0004

Non-Congestive Heart Failure	Symptomatic HIV	1.55(0.85, 2.83) 0.1531	0.0195 0.87(0.62, 1.21) 0.4138	0.0373 1.19(0.71, 1.99) 0.5165	<0.0001 1.03(0.66, 1.40) <0.0001	0.12(-0.11, 0.35) 0.3190
	Asymptomatic HIV	0.20(0.06, 0.61) 0.0050	0.92(0.67, 1.27) 0.6250	0.44(0.23, 0.85) 0.0141	-0.44(-0.63, -0.26) <0.0001	0.02(-0.12, 0.15) 0.8135
	Symptomatic HIV	3.08(2.33, 4.06) <0.0001	1.59(1.26, 2.01) <0.0001	1.42(1.01, 2.00) 0.0437	1.49(1.31, 1.67) <0.0001	0.34 (0.20, 0.47) <0.0001
	Asymptomatic HIV	1.05(0.38, 2.86) 0.9260	0.50(0.27, 0.92) 0.0270	0.83(0.38, 1.80) 0.6367	-1.86(-3.07, -0.65) 0.0026	-0.50(-1.08, 0.08) 0.0920
Congestive Heart Failure	Symptomatic HIV	2.04(1.39, 2.99) 0.0002	0.76(0.58, 1.00) 0.0476	0.93(0.64, 1.35) 0.6856	1.77(1.10, 2.44) <0.0001	0.63(0.31, 0.95) 0.0001
	Asymptomatic HIV	0.31(0.14, 0.69) 0.0040	0.64(0.48, 0.86) 0.0028	0.48(0.29, 0.80) 0.0049	-0.79(-1.02, -0.56) <0.0001	-0.07(-0.21, 0.08) 0.3633
Non-Chronic Obstructive Pulmonary Disease	Symptomatic HIV	3.17(2.45, 4.11) <0.0001	1.60(1.32, 1.94) <0.0001	1.40(1.04, 1.89) 0.0274	1.62(1.39, 1.84) <0.0001	0.45(0.32, 0.59) <0.0001
	Asymptomatic HIV	0.71(0.10, 5.14) 0.7343	0.54(0.17, 1.75) 0.3070	0.34(0.05, 2.46) 0.2847	-0.94(-2.14, 0.26) 0.1230	0.01(-0.67, 0.69) 0.9770
Chronic Obstructive Pulmonary Disease	Symptomatic HIV	1.75(1.11, 2.75) 0.0156	0.57(0.38, 0.84) 0.0052	0.79(0.50, 1.26) 0.3241	1.90(1.28, 2.52) <0.0001	0.23(-0.12, 0.58) 0.1927
	Asymptomatic HIV	0.33 (0.15, 0.74) 0.0071	0.65(0.45, 0.94) 0.0208	0.47(0.28, 0.80) 0.0054	-0.74(-0.96, -0.52) <0.0001	-0.01(-0.15, 0.13) 0.8686
Non-Chronic Kidney Disease	Symptomatic HIV	2.86(2.24, 3.64) <0.0001	1.23(0.97, 1.54) 0.0831	1.31(0.99, 1.73) 0.0549	1.64(1.43, 1.84) <0.0001	0.40(0.27, 0.54) <0.0001
	Asymptomatic HIV	0.36(0.05, 2.56) 0.3051	0.66(0.40, 1.08) 0.0999	0.41(0.10, 1.68) 0.2160	-1.04(-2.31, 0.23) 0.1082	-0.54(-1.14, 0.06) 0.0754
Chronic Kidney Disease	Symptomatic HIV	2.67(1.51, 4.72) 0.0008	1.48(1.08, 2.04) 0.0160	1.27(0.69, 2.36) 0.4400	1.73(0.86, 2.59) <0.0001	0.44(0.04, 0.85) 0.0321
AMI TYPE (%)						
ST-segment elevation myocardial infarction	Asymptomatic HIV	0.49(0.20, 1.17) 0.1090	1.31(0.88, 1.96) 0.1818	0.70(0.40, 1.22) 0.2059	-0.36(-0.79, 0.07) 0.0977	-0.30(-0.56, -0.04) 0.0229
	Symptomatic HIV	2.90(2.22, 3.79) <0.0001	1.49(1.14, 1.93) 0.0030	1.28(0.95, 1.71) 0.0994	1.51(1.19, 1.83) <0.0001	0.49(0.29, 0.68) <0.0001
Non-ST-segment elevation myocardial infarction	Asymptomatic HIV	0.23(0.06, 0.91) 0.0357	0.38(0.26, 0.57) <0.0001	0.25(0.08, 0.78) 0.0165	-1.00(-1.27, -0.73) <0.0001	0.10(-0.07, 0.26) 0.2412
	Symptomatic HIV	2.40(1.58, 3.64) <0.0001	1.22(0.97, 1.54) 0.0897	1.14(0.68, 1.90) 0.6155	1.85(1.58, 2.13) <0.0001	0.37(0.21, 0.54) <0.0001



Supplemental Figure.1 In-hospital mortality and outcomes in non-matching model in AMI underwent PCI procedure Asymptomatic HIV/AIDS and Symptomatic HIV/AIDS cohorts

(A) Adjusted odd ratios for in-hospital mortality and outcomes. (B) Adjusted β value for LOS and NPR; Represented as odds ratio and β value (95% confidence interval). Adjusted for age, sex, race, primary payer, socioeconomic status, smoking, prior CABG, and comorbidity.

