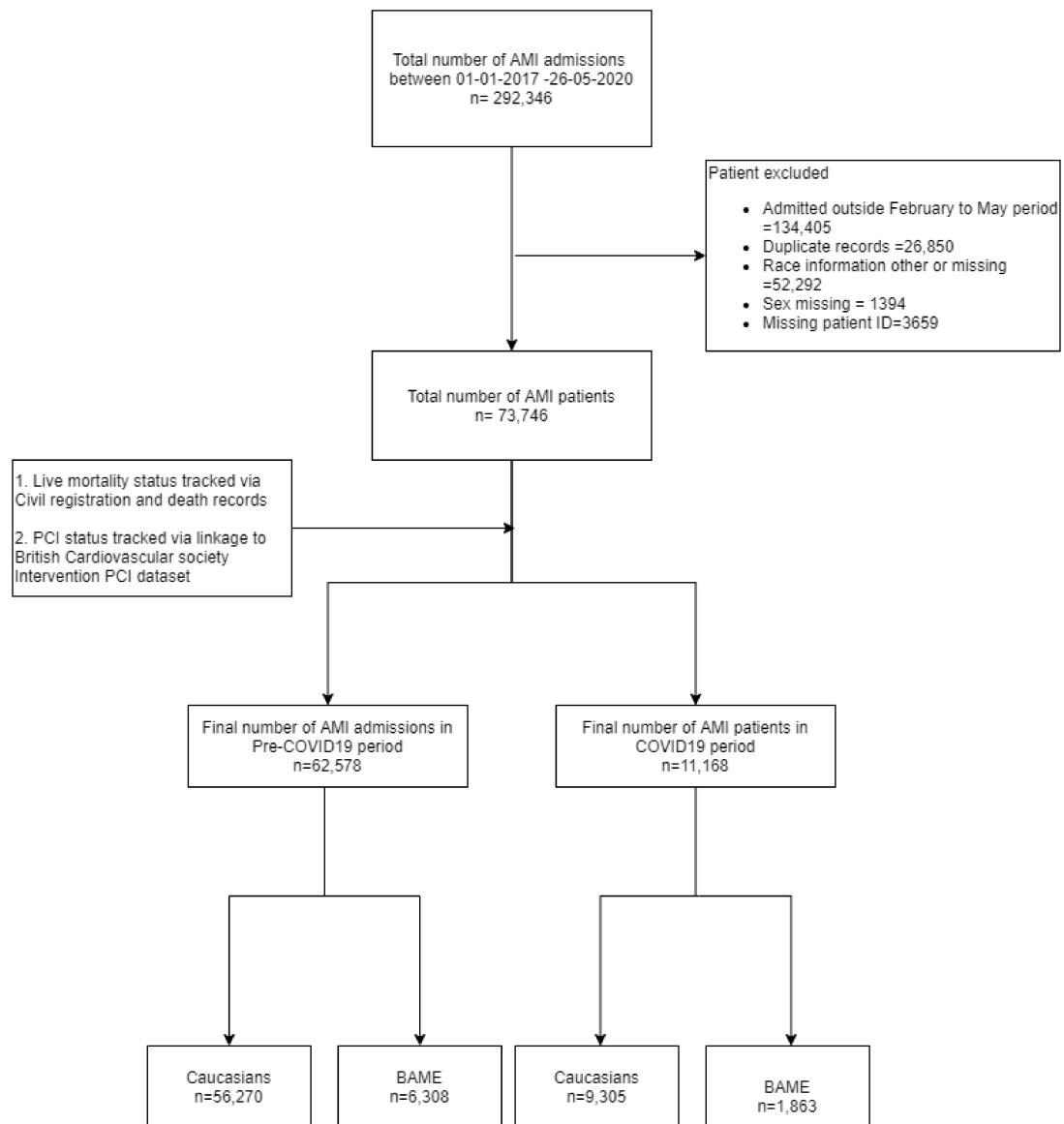
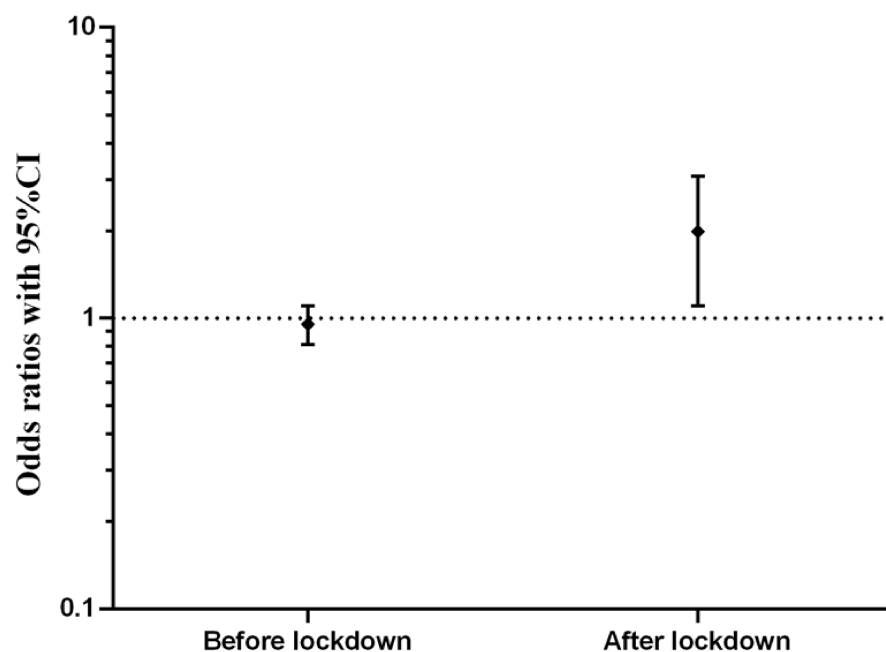


Supplementary Figure 1: STROBE flow diagram of study selection and record linkage across multiple datasets



Supplementary figure 2: Adjusted in-hospital mortality in the BAME compared to White patients before and after lockdown period.



Supplementary table 1: Missing information for each variable used in the imputation models in the MINAP registry stratified according to pre COVID19 and COVID19 period.

Variables	Pre COVID19 period	COVID19 period
Age	0	0
Sex	0	0
Race	0	0
BMI	24,269 (38.5%)	3,707 (34.1%)
Heart rate	1783 (2.8%)	1105 (10.0%)
Systolic blood pressure	1991 (3.2%)	1145 (10.5%)
Clinical syndrome	0	0
Creatinine	2123 (3.4%)	1067 (9.8%)
Kilip Class	2,604 (8.8%)	986 (9.0%)
LV systolic function	10,292 (9.8%)	902 (8.3%)
Percutaneous coronary intervention	5,665 (9.0%)	877 (8.0%)
Coronary artery bypass graft	5,657 (9.0%)	865 (7.9%)
Heart failure	5,379 (8.5%)	901 (8.3%)
Hypercholesterolemia	5,401 (8.5%)	918 (8.4%)
Angina	3,641 (12.3%)	1211 (11.1%)
Cerebrovascular disease	5,406 (8.6%)	956 (8.7%)
Myocardial infarction	4,926 (7.8%)	906 (8.3%)

Peripheral vascular disease	5,464 (12.5%)	1254 (11.3%)
Chronic kidney disease	5,472 (8.6%)	866 (7.9%)
Diabetes	1,464 (2.3%)	216 (2.0%)
Hypertension	4,528 (7.2%)	691 (6.3%)
Smoking status	11,394 (18.1%)	1701 (15.7%)
Asthma / COPD	5,255 (8.3%)	966 (8.8%)
Family history of CHD	14007 (22.2%)	2,345 (21.5%)
Low molecular weight heparin	13,358 (21.3%)	2295 (21.2%)
Unfractionated heparin	13,418 (21.3%)	2,354 (21.5%)
Warfarin	13,429 (21.3%)	2,369 (21.7%)
Loop Diuretic	13,183 (21.2%)	2,358 (21.5%)
Glycoprotein use	8,290 (13.2%)	1366 (12.5%)
Seen by cardiologist	381 (0.5%)	101 (0.9%)
Coronary angiography	9,428 (14.9%)	1801 (16.4%)
Percutaneous coronary intervention	24,310 (38.6%)	2,726 (25.1%)
P2Y12 use	2,161 (3.4%)	365 (3.3%)
Dual antiplatelet therapy	1,497 (2.4%)	301 (2.9%)
ACE inhibitors	12,261 (19.4%)	1710 (15.8%)
In-hospital mortality	0	0

Supplementary table 2: Adjusted mortality in BAME compared to White patients during COVID19 period compared to pre COVID19 period in the AMI cohort

COVID19 period	Reference	Adjusted odds ratio (95% confidence interval)*
Adjusted In hospital mortality		
February 2020 (n=19,341)	Pre COVID19 period	1.67 (1.12-2.65)
March 2020 (n=19,737)	Pre COVID19 period	1.69 (1.18-2.76)
April 2020 (n=18,879)	Pre COVID19 period	1.38 (0.87-2.66)
May 2020 (n=15,789)	Pre COVID19 period	2.39 (1.15-5.63)
Overall mortality 2020 (n=73,746)	Pre COVID19 period	1.68 (1.27-2.28)
Adjusted 7-day mortality		
February 2020 (n=19,341)	Pre COVID19 period	1.76 (1.14-2.72)
March 2020 (n=19,737)	Pre COVID19 period	1.64 (1.10-2.60)
April 2020 (n=18,879)	Pre COVID19 period	1.49 (0.81-2.71)
May 2020 (n=15,789)	Pre COVID19 period	2.69 (1.25-5.79)
Overall mortality 2020 (n=73,746)	Pre COVID19 period	1.81 (1.31-2.19)

*Adjusted for age, gender, ethnicity, heart rate, blood pressure, body mass index, serum creatinine level, family history of coronary heart diseases, left ventricle systolic dysfunction, history of heart failure, prior percutaneous coronary intervention

(PCI), history of diabetes mellitus, hypercholesterolaemia, history of angina, history of myocardial infarction, history of Cerebrovascular accident, history of peripheral vascular disease, hypertension, smoking, asthma/COPD, admission under cardiology, prescription of low molecular weight heparin, warfarin, un-fraction heparin, GP 2b/3a inhibitor, furosemide, angiotensin converting enzyme inhibitor/angiotensin receptor blockers, aspirin, P2Y12 inhibitor, , cardiogenic shock, coronary angiogram, PCI on imputed data

Supplementary table 3: Adjusted mortality in BAME compared to White patients during COVID19 period compared to pre COVID19 period in the AMI cohort in the “rapid reporting hospitals”.

COVID19 period	Reference	Adjusted odds ratio (95% confidence interval)*
Adjusted In hospital mortality		
February 2020 (n=7,934)	Pre COVID19 period	1.62 (0.95-3.40)
March 2020 (n=8,018)	Pre COVID19 period	3.07 (1.45-6.50)
April 2020 (n=7,561)	Pre COVID19 period	2.41 (0.94-6.19)
May 2020 (n=6,226)	Pre COVID19 period	2.94 (0.91-10.6)
Overall mortality 2020 (n=29,739)	Pre COVID19 period	2.52 (1.52-4.18)
Adjusted 7 day mortality		
February 2020 (n=7,934)	Pre COVID19 period	1.80 (1.09-3.86)
March 2020 (n=8,018)	Pre COVID19 period	4.00 (1.78-9.00)
April 2020 (n=7,561)	Pre COVID19 period	2.31 (0.83-6.44)
May 2020 (n=6,226)	Pre COVID19 period	3.21 (1.05-12.68)
Overall mortality 2020 (n=29,739)	Pre COVID19 period	2.43 (1.56-3.77)

Adjusted for age, gender, ethnicity, heart rate, blood pressure, body mass index, serum creatinine level, family history of coronary heart diseases, left ventricle systolic dysfunction, history of heart failure, prior percutaneous coronary intervention (PCI), history of diabetes mellitus, hypercholesterolaemia, history of angina, history of myocardial infarction, history of Cerebrovascular accident, history of peripheral vascular disease, hypertension, smoking, asthma/COPD, admission under cardiology, prescription of low molecular weight heparin, warfarin, un-fraction heparin, GP 2b/3a inhibitor, furosemide, angiotensin converting enzyme inhibitor/angiotensin receptor blockers, aspirin, P2Y12 inhibitor, , cardiogenic shock, coronary angiogram, PCI on imputed data

Table 4a: Baseline characteristics of BAME compared to White patients undergoing PCI stratified according to pre-COVID19 and COVID19 pandemic periods.

Variables	Pre-COVID19 Whites N=26,750	Pre COVID19 BAME N= 2,794	P value*	COVID19 Whites N=4,267	COVID19 BAME N=771	P value
Age, years median (IQR)	66 (56-75)	60 (50-70)	<0.001	66 (57-74)	59 (51-68)	<0.001
Male (%)	24716 (73.0%)	2758 (77.6%)	<0.001	4513 (72.9%)	847 (77.4%)	<0.001
BMI, median (IQR)	27.7 (24.7-31.2)	26.9 (24.2-30.1)	<0.001	27.9 (24.9-31.6)	26.8 (24.4-29.7)	<0.001
Presenting Characteristics						
Heart rate, bpm, median (IQR)	75 (65-88)	77 (66-89)	<0.001	76 (65-88)	79 (67-90)	<0.001
Systolic blood pressure, median (IQR)	136 (119-155)	135 (118-153)	<0.001	139 (120-158)	135 (117-156)	<0.001
Clinical syndrome			<0.001			0.453
STEMI	14091 (54.0%)	1310 (47.7%)		1927 (51.3%)	358 (49.8%)	
NSTEMI	12025 (46.0%)	1433 (52.3%)		1828 (48.7%)	361 (50.2%)	
Creatinine umol/L, median (IQR)	82 (70-97)	84 (71-102)	<0.001	80 (68-94)	81 (68-96)	<0.001
<i>Killip Class</i>			<0.001			0.018
No heart failure	20906 (87.1%)	2200 (84.4%)		3251 (88.9%)	597 (88.4%)	
Basal crepitation	1742 (7.3%)	200 (7.7%)		229 (6.3%)	31 (4.6%)	
Pulmonary oedema	526 (2.2%)	101 (3.9%)		74 (2.0%)	25 (3.7%)	
Cardiogenic shock	836 (3.4%)	106 (4.1%)		104 (2.8%)	22 (3.2%)	
LV systolic function			<0.001			0.295
Good	9756 (44.1%)	1191 (48.5%)		1504 (46.9%)	338 (49.0%)	
Moderate	6517 (29.4%)	641 (26.1%)		912 (28.4%)	202 (28.3%)	
Poor	1611 (7.3%)	174 (7.1%)		238 (7.4%)	39 (5.6%)	
Not assessed	4253 (19.2%)	449 (18.3%)		557 (17.4%)	111 (16.1%)	
Previous medical history						
Percutaneous coronary intervention	3217 (13.5%)	494 (19.5%)	<0.001	521 (14.5%)	119 (17.4%)	0.054
Coronary artery bypass graft	1050 (4.4%)	176 (6.9%)	<0.001	135 (3.8%)	41 (6.0%)	<0.001
Heart failure	820 (3.4%)	109 (4.4%)	0.015	102 (2.9%)	18 (2.6%)	0.769
Hypercholesterolemia	8054 (33.4%)	1194 (47.1%)	<0.001	1176 (32.6%)	309 (44.9%)	<0.001
History of Angina	3746 (15.5%)	505 (20.2%)	<0.001	500 (14.0%)	109 (16.1%)	0.141

Cerebrovascular disease	1319 (5.4%)	127 (5.1%)	0.383	185 (5.1%)	41 (6.0%)	0.346
Myocardial infarction	4070 (16.8%)	596 (23.4%)	<0.001	620 (17.1%)	135 (19.7%)	0.100
Peripheral vascular disease	886 (3.7%)	66 (2.6%)	0.007	125 (3.5%)	16 (2.3%)	0.130
Chronic kidney disease	826 (3.4%)	179 (7.2%)	<0.001	137 (3.8%)	36 (5.3%)	0.069
Diabetes			<0.001			<0.001
Not diabetic	20865 (80.2%)	1524 (56.3%)		3005 (78.4%)	439 (60.4%)	
Diet controlled	869 (3.3%)	121 (4.5%)		160 (4.2%)	37 (5.1%)	
Oral medications	2884 (11.1%)	788 (29.1%)		468 (12.1%)	164 (22.5%)	
Insulin therapy	1389 (5.3%)	274 (10.1%)		201 (5.2%)	87 (12.0%)	
Hypertension	11575 (48.2%)	1551 (60.4%)	<0.001	1809 (49.4%)	400 (57.8%)	<0.001
<i>Smoking status</i>			<0.001			<0.001
Never smoked	6483 (29.9%)	1197 (51.3%)		1110 (32.2%)	302 (46.8%)	
Previous smoker	8107 (35.4%)	443 (19.0%)		1206 (35.1%)	118 (18.3%)	
Current smoker	7955 (34.7%)	692 (29.7%)		1129 (32.7%)	225 (34.8%)	
Asthma / COPD	3480 (14.4%)	293 (11.4%)	<0.001	552 (15.4%)	69 (10.1%)	<0.001
Family history of CHD	7083 (33.1%)	694 (34.1%)	0.294	1073 (34.7%)	208 (32.8%)	0.405

BMI=body mass index, SD= standard deviation, bmp= beats per minute, STEMI= ST elevation myocardial infarction, NSTEMI= non ST elevation myocardial infarction, LV= left ventricle, COPD= chronic obstructive airway disease, CHD = coronary heart disease, ACE= angiotensin converting enzyme, IQR= interquartile range

Table 4b: Procedural characteristics of BAME compared to White patients stratified undergoing PCI stratified according to pre-COVID19 and COVID19 pandemic periods.

Variables	Pre-COVID19 Whites N=26,750	Pre COVID19 BAME N= 2,794	P value*	COVID19 Whites N=4,267	COVID19 BAME N=771	P value
Procedural characteristics						
Arterial blood gas PH, median (IQR)	7.23 (7.1-7.34)	7.2 (7.03-7.31)	0.191	7.24 (7.14-7.35)	7.29 (7.17-7.32)	0.872
Base excess	-4. 0(-9.2-0)	-8.5 (-14.5-.3.4)	<0.001	0 (-6-0)	0 (-5.4-0)	0.742
Glasgow come scale			<0.001			0.475
GCS<8	470 (22.1%)	41 (32.5%)		46 (17.0%)	6 (12.8%)	
GCS ≥8	1653 (77.9%)	85 (67.5%)		225 (83.0%)	41 (87.2%)	

Mechanical ventilation	609 (22.4%)	47 (26.7%)	0.181	66 (16.1%)	7 (14.9%)	0.852
Lesion attempted			<0.001			0.915
1	19144 (72.3%)	1925 (69.5%)		3041 (72.7%)	556 (72.9%)	
2	5136 (19.4%)	540 (19.5%)		789 (18.9%)	140 (18.3%)	
3 or more	2204 (8.3%)	304 (11.0%)		352 (8.4%)	67 (8.8%)	
Vessel attempted						
Grafts	625 (2.4%)	84 (3.2%)	0.022	82 (2.0%)	17 (2.3%)	0.607
LMS	987 (3.8%)	108 (4.1%)	0.504	146 (3.5%)	36 (4.8%)	0.082
RCA	9598 (37.1%)	912 (34.5%)	<0.001	1511 (36.5%)	243 (32.6%)	0.031
LAD	12500 (48.4%)	1335 (50.5%)	0.042	2040 (49.3%)	388 (52.0%)	0.185
LCX	5950 (23.0%)	698 (26.4%)	<0.001	1027 (24.8%)	196 (26.3%)	0.40
Multi-vessel PCI	3311 (12.8%)	419 (15.8%)	<0.001	575 (13.9%)	117 (15.7%)	0.207
Number of stents			0.215			0.245
0	2855 (10.8%)	332 (12.1%)		499 (11.9%)	110 (14.6%)	
1	14542 (55.2%)	1496 (54.5%)		2286 (54.7%)	404 (53.5%)	
2	6054 (23.0%)	610 (22.2%)		970 (23.2%)	170 (22.5%)	
3 or more	2892 (11.0%)	305 (11.1%)		423 (10.1%)	71 (9.4%)	
Inotropic support	621 (2.4%)	80 (3.0%)	0.052	66 (1.7%)	14 (1.9%)	0.702
Intra-aortic balloon pump	336 (1.3%)	49 (1.9%)	0.022	19 (0.5%)	4 (0.5%)	0.851
Impella	12 (<1%)	2 (0.1%)	0.524	2 (0.1%)	1 (0.1%)	0.415
TIMI flow post PCI			0.446			0.301
0	735 (4.0%)	64 (3.5%)		81 (2.7%)	15 (3.4%)	
1	156 (0.8%)	17 (0.9%)		25 (0.8%)	4 (0.9%)	
2	647 (3.5%)	53 (2.9%)		100 (3.4%)	8 (1.8%)	
3	17060 (91.7%)	1,685 (92.6%)		2749 (93.1%)	417 (93.9%)	
IVUS use	1278 (5.6%)	188 (7.2%)	<0.001	274 (7.3%)	115 (15.7%)	<0.001
OCT use	564 (2.5%)	81 (3.1%)	0.055	87 (2.3%)	28 (3.8%)	0.016
FFR/iFR use	1392 (6.1%)	181 (6.9%)	0.082	217 (5.8%)	45 (6.1%)	0.685
Procedural outcomes						
MACCE	1189 (4.5%)	136 (5.0%)	0.282	118 (2.9%)	17 (2.3%)	0.353
In-hospital bleeding	265 (1.0%)	30 (1.1%)	0.674	68 (1.6%)	5 (0.6%)	0.041
In-hospital death	823 (3.2%)	106 (3.9%)	0.033	73 (1.8%)	15 (2.0%)	0.692
7 day mortality	1076 (4.2%)	119 (4.4%)	0.602	129 (3.3%)	22 (3.0%)	0.721

LAD= left anterior descending artery, LMS= left main stem artery, LCX= left circumflex artery, TIMI= thrombolysis in myocardial infarction, IVUS= intravascular ultrasound, OCT= optical coherence tomography, FFR= fractional flow reserve, iFR= instantaneous flow reserve, MACCE= major adverse cerebrovascular events.

Supplementary References

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