

Supplementary file 3:

Sensitivity analyses for both outcomes studied for three groups: (1) All IHCA, (2) IHCA in medical admissions to wards and (3) for IHCA using 08:00–16:29 h as definition of daytime

Outcome	Model	Category	All IHCA (n=27,700)		Sensitivity - Medical/Ward (n=12,968)		Sensitivity - 08:00-16:29 (n=27,700)	
			OR	(95% CI)	OR	(95% CI)	OR	(95% CI)
ROSC>20 min	Main	Weekend daytime	0.88	(0.81, 0.95)	0.99	(0.88, 1.12)	0.84	(0.77, 0.93)
		Night-time	0.72	(0.68, 0.76)	0.71	(0.65, 0.77)	0.75	(0.70, 0.80)
Hospital survival	Main	Weekend daytime	0.72	(0.64, 0.80)	0.74	(0.62, 0.89)	0.71	(0.62, 0.80)
		Night-time	0.58	(0.54, 0.63)	0.53	(0.46, 0.60)	0.61	(0.57, 0.66)
ROSC>20 min	Subgroups - rhythm	Shockable - Weekend daytime	0.86	(0.69, 1.07)	1.03	(0.71, 1.49)	0.99	(0.77, 1.28)
		Shockable - Night-time	0.72	(0.62, 0.84)	0.72	(0.56, 0.92)	0.86	(0.73, 1.01)
		Asystole - Weekend daytime	0.76	(0.62, 0.92)	0.88	(0.66, 1.17)	0.65	(0.52, 0.82)
		Asystole - Night-time	0.59	(0.51, 0.67)	0.65	(0.53, 0.78)	0.61	(0.53, 0.70)
		PEA - Weekend daytime	0.93	(0.83, 1.03)	1.02	(0.87, 1.19)	0.89	(0.78, 1.01)
		PEA - Night-time	0.83	(0.77, 0.89)	0.80	(0.72, 0.90)	0.83	(0.77, 0.90)
		Other - Weekend daytime	0.81	(0.63, 1.05)	0.97	(0.68, 1.37)	0.76	(0.56, 1.03)
		Other - Night-time	0.48	(0.40, 0.58)	0.44	(0.34, 0.56)	0.48	(0.39, 0.58)
Hospital survival	Subgroups - rhythm	Shockable - Weekend daytime	0.85	(0.70, 1.04)	0.82	(0.56, 1.18)	0.89	(0.71, 1.12)
		Shockable - Night-time	0.72	(0.62, 0.83)	0.71	(0.55, 0.91)	0.82	(0.71, 0.95)
		Asystole - Weekend daytime	0.55	(0.40, 0.76)	0.83	(0.45, 1.53)	0.52	(0.36, 0.75)
		Asystole - Night-time	0.43	(0.34, 0.53)	0.49	(0.32, 0.75)	0.47	(0.38, 0.59)
		PEA - Weekend daytime	0.70	(0.59, 0.83)	0.68	(0.52, 0.90)	0.67	(0.55, 0.81)
		PEA - Night-time	0.64	(0.57, 0.73)	0.56	(0.46, 0.68)	0.65	(0.58, 0.73)
		Other - Weekend daytime	0.66	(0.51, 0.86)	0.72	(0.50, 1.04)	0.66	(0.49, 0.90)
		Other - Night-time	0.39	(0.32, 0.47)	0.33	(0.24, 0.44)	0.38	(0.31, 0.47)
ROSC>20 min	Subgroups - age	<65 - Weekend daytime	0.83	(0.70, 0.99)	0.93	(0.70, 1.23)	0.77	(0.63, 0.94)
		<65 - Night-time	0.78	(0.69, 0.88)	0.84	(0.70, 1.02)	0.78	(0.69, 0.88)
		65-74 - Weekend daytime	0.94	(0.79, 1.12)	1.10	(0.84, 1.44)	1.00	(0.82, 1.23)
		65-74 - Night-time	0.73	(0.64, 0.82)	0.72	(0.60, 0.87)	0.83	(0.73, 0.94)
		75-84 - Weekend daytime	0.80	(0.70, 0.93)	0.91	(0.74, 1.11)	0.76	(0.65, 0.90)

		75-84 - Night-time	0.72	(0.65, 0.79)	0.72	(0.63, 0.83)	0.74	(0.66, 0.82)
		85+ - Weekend daytime	0.98	(0.83, 1.16)	1.07	(0.85, 1.35)	0.92	(0.76, 1.12)
		85+ - Night-time	0.66	(0.58, 0.74)	0.59	(0.50, 0.70)	0.67	(0.59, 0.76)
Hospital survival	Subgroups - age	<65 - Weekend daytime	0.70	(0.57, 0.85)	0.65	(0.44, 0.94)	0.65	(0.51, 0.82)
		<65 - Night-time	0.63	(0.55, 0.72)	0.62	(0.49, 0.80)	0.67	(0.58, 0.77)
		65-74 - Weekend daytime	0.84	(0.67, 1.03)	0.86	(0.59, 1.26)	0.95	(0.74, 1.22)
		65-74 - Night-time	0.63	(0.54, 0.74)	0.59	(0.45, 0.78)	0.76	(0.65, 0.89)
		75-84 - Weekend daytime	0.73	(0.60, 0.88)	0.80	(0.59, 1.10)	0.70	(0.56, 0.87)
		75-84 - Night-time	0.56	(0.49, 0.65)	0.56	(0.44, 0.71)	0.57	(0.50, 0.66)
		85+ - Weekend daytime	0.60	(0.46, 0.78)	0.66	(0.45, 0.97)	0.57	(0.42, 0.77)
		85+ - Night-time	0.49	(0.40, 0.59)	0.33	(0.25, 0.45)	0.47	(0.39, 0.57)
ROSC>20 min	Subgroups - location	ED - Weekend daytime	0.79	(0.63, 0.99)	N/A		0.78	(0.60, 1.02)
		ED - Night-time	0.80	(0.68, 0.95)			0.78	(0.65, 0.93)
		Ward* - Weekend daytime	0.94	(0.85, 1.04)			0.90	(0.80, 1.01)
		Ward* - Night-time	0.72	(0.67, 0.77)			0.75	(0.70, 0.81)
		CCU - Weekend daytime	0.68	(0.53, 0.87)			0.61	(0.46, 0.81)
		CCU - Night-time	0.73	(0.61, 0.87)			0.71	(0.59, 0.85)
		ICU/HDU - Weekend daytime	0.71	(0.50, 1.01)			0.74	(0.50, 1.10)
		ICU/HDU - Night-time	0.62	(0.48, 0.79)			0.79	(0.60, 1.03)
		Treatment area† - Weekend daytime	1.00	(0.67, 1.50)			1.13	(0.69, 1.83)
		Treatment area† - Night-time	0.63	(0.45, 0.89)			0.65	(0.49, 0.85)
Hospital survival	Subgroups - location	ED - Weekend daytime	0.78	(0.57, 1.05)	N/A		0.76	(0.53, 1.09)
		ED - Night-time	0.77	(0.61, 0.96)			0.79	(0.63, 1.00)
		Ward* - Weekend daytime	0.73	(0.63, 0.84)			0.74	(0.63, 0.88)
		Ward* - Night-time	0.54	(0.49, 0.60)			0.57	(0.51, 0.63)
		CCU - Weekend daytime	0.70	(0.54, 0.90)			0.65	(0.48, 0.87)
		CCU - Night-time	0.60	(0.50, 0.72)			0.63	(0.52, 0.76)
		ICU/HDU - Weekend daytime	0.68	(0.46, 1.02)			0.60	(0.37, 0.98)
		ICU/HDU - Night-time	0.66	(0.50, 0.86)			0.77	(0.57, 1.04)
		Treatment area† - Weekend daytime	0.62	(0.40, 0.96)			0.66	(0.40, 1.09)
		Treatment area† - Night-time	0.58	(0.39, 0.84)			0.59	(0.43, 0.79)

(PEA, pulseless electrical activity; ROSC>20 min, return of spontaneous circulation for greater than 20 minutes; ED, Emergency department; CCU, Coronary care unit or Cardiac catheterization laboratory; ICU/HDU, Intensive care unit, High dependency unit or combined critical care unit; *Ward includes Obstetrics area, Intermediate care area, Emergency admissions unit, Other inpatient location and Clinic or Non-clinical area; †Treatment area includes Theatre & recovery and Imaging department or Specialist treatment area)