Participants and Baseline Characteristics

Descriptive statistics for the AIMS, with mean (SD) number of patients attending an AIMS per session, number of patients attending ED and percent of patients discharged within the four-hour target, during times when the AIMS was operational, before and after AIMS implementation and for intervention and control sites.

Site		A	B	C [a]	D	E [b]	F	G	H [c]
Mean AIMS attendance (95% CI)		11.83 (11.29 to 12.38)	9.24 (8.82 to 10.26)	6.80	2.54 (1.80 to 3.29)		8.12 (7.36 to 8.88)	2.69 (2.26 to 3.13)	5.39 (5.05 to 5.44)
ED Attendance count, mean (95% CI)									
Intervention	Before	87.94 (64.66 to 111.22)	57.15 (37.79 to 76.51)	75.57 (53.11 to 98.03)	116.72 (81.64 to 151.80)	112.33 (86.46 to 138.20)	70.74 (47.46 to 94.02)	31.04 (17.91 to 44.17)	
	After	79.22 (58.03 to 100.41)	57.54 (39.17 to 75.91)	73.16 (49.91 to 96.41)	120.96 (93.58 to 148.34)	119.6 (87.08 to 152.12)	77.24 (54.25 to 100.23)	32.79 (20.38 to 45.20)	66.81 (44.23 to 89.39)
Control	Before	47.91 (29.86 to 65.96)	54.48 (37.37 to 71.59)	61.85 (41.74 to 81.96)	117.06 (88.64 to 145.48)	69.24 (48.39 to 90.09)	91.34 (67.64 to 115.04)	78.65 (58.36 to 98.94)	
	After	60.06 (40.24 to 79.88)	50.55 (35.26 to 65.84)	66.37 (48.26 to 84.48)	127.38 (102.94 to 151.82)	76.82 (55.85 to 97.79)	94.41 (70.36 to 118.46)	80.91 (56.61 to 105.21)	113.01 (83.32 to 142.70)
ED 4-hour target, percent									
Intervention	Before	71.7	61.8	91.6	89.2	92.9	95.7	87.4	
	After	70.8	45.4	86.9	86.1	88.8	88.9	64.7	87.6
Control	Before	86.5	64.4	90.9	86.6	94.0	89.0	90.4	
	After	80.8	49.0	86.5	78.3	82.0	62.9	58.0	85.1
Ambulance calls – 8 minutes, percent									
Intervention	Before	48.3	50.3	63.6	62.3		66.3		
	After	39.8	44.1	51.7	54.7		51.8		56.2
Control	Before	68.0	42.5	61.7	58.0		54.9		
	After	49.8	40.2	53.0	45.7		47.7		55.0

Ambulance calls – 19 minutes, percent

Intervention	Before	89.6	90.9	97.8	96.1		98.5	
	After	83.4	86.2	94.5	90.8		95.2	90.5
Control	Before	95.4	85.8	98.3	95.1		95.9	
	After	89.2	82.1	95.7	90.7		94.9	94.0
Estimated ED attendances avoided, mean (95% CI) [d]		-6.39 (-6.40 to -6.37)	-1.75 (-1.96 to -1.54)	0.00 (-1.22 to 1.22)			3.93 (3.59 to 4.28)	-1.05 (-1.26 to -0.84)	-1.05 (-1.26 to -0.84)
AIMS cost per annum		£253,643	£158,654	£165,279			£109,650	£61,389	£126,820
Threshold (ED)		-15.27	-9.72	-9.95			-7.25	-10.61	-8.14
Mean incremental cost per ED attendance avoided		£206	£676	N/A			-£422	£1,351	£1,002
Percent ambulance conveyed		45.90	51.75	43.60			51.41	46.92	48.08
SA1 Threshold (ED, ambulance)		-8.65	-5.22	-5.96			-3.90	-5.96	-4.52

Single city ITSA analysis (with p values)

City	A	B	C	D	E	F	G
Constant	76.12 (<0.001)	46.68 (<0.001)	76.25 (<0.001)	106.20 (<0.001)	97.48 (<0.001)	62.45 (<0.001)	31.57 (<0.001)
t - Slope for control group	0.005 (0.144)	0.0005 (0.630)	-0.0004 (0.760)	0.013 (<0.001)	0.112 (0.066)	0.002 (0.036)	0.0001 (0.922)
x - Difference in attendance for control when AIMS introduced	-4.89 (0.005)	-2.41 (0.099)	1.29 (0.537)	-6.02 (0.075)	-5.24 (0.237)	4.05 (0.061)	2.22 (0.217)
xt - Slope for control post AIMS	-0.014 (<0.001)	0.008 (0.052)	-0.011 (0.086)	-0.016 (0.286)	-0.106 (0.082)	0.004 (0.763)	-0.002 (0.713)
PT - Post trend	-0.009 (<0.001)	0.008 (0.034)	-0.012 (0.072)	-0.003 (0.861)	0.006 (<0.001)	0.006 (0.644)	-0.002 (0.720)
F - Model fit	77.6 (<0.001)	110 (<0.001)	9.4 (<0.001)	51,160 (<0001)	12.6 (<0.001)	142 (<0.001)	2715 (<0.001)

Adverse Events

None