Participant flow



Child patients attend St. Mary's Paediatric Emergency Department or Northwick Park Urgent Care Centre

SAMPLE SELECTION

Paediatrician manually checks electronic attendance records and identifies attendances appropriate for inclusion in trial Include: patients who (i) were age 0-4 and (ii) had attendance notes suggestive of a nonurgent attendance Exclude: patients (i) with non-London postcodes, (ii) who received medicine, treatment, or referral to another healthcare professional

CREATE UNIT OF RANDOMISATION

Families of eligible patients identified through patient last name and postcode

TREATMENT

Families sent educationpack within 2-4 days of attendance (n = 1963) Rolling random assignment of new families to control or treatment group over Oct 2017-Jun 2018

CONTROL

Families receive no special follow-up contact (n = 1969)

OUTCOME MEASURE

Analyse data on all nonurgent attendances over Oct 2017 – Sep 2018 (n=3932 families)

Baseline characteristics

Variable	Number of observations	Control group average	Treatment group average
Patient age	3,932	1.47	1.44
% female patients	3,932	45.7%	46.9%
Average IMD score	3,912	26.2	26.2
Average number nonurgent attendances made in 3 years before intervention	3,932	0.76	0.73
Average miles between postcode and hospital	3,932	2.3	2.3

Outcome measures

Table 1.

	Total (n=3932 families)	Control (n=1969 families)	Treatment (n=1963 families)
	Mean (SD) / %		
Outcome measure			
Average number of nonurgent attendances (incl. reattendances) from October 2017 to September 2018	1.3 (0.7)	1.3 (0.7)	1.3 (0.8)
% reattendance rate (0 = no reattendances, 1 = any reattendance)	23.9%	24.6%	23.2%
Patient characteristics			
Patient age at initial nonurgent attendance	1.5 (1.4)	1.5 (1.4)	1.4 (1.4)
% female at initial nonurgent attendance	46.3%	45.6%	46.9%
Miles between hospital and patient postcode	2.3 (1.6)	2.3 (1.5)	2.3 (1.6)
Nonurgent attendances made by patient's family in 3 years before trial (Oct 2014- Sep 2017)	0 = 64.7% of families 1-3 = 27.7% 4+ = 7.7%	0 = 68.2% of families 1 = 25.6% 2+ = 6.2%	0 = 67.1% of families 1 = 27.7% 2+ = 5.2%
Deprivation quintile	3.0 (1.4)	3.0 (1.4)	3.0 (1.4)

Table 2. OLS regression results showing the predictors of nonurgent reattendance following an initial nonurgent attendance

Outcome: Probability of any nonurgent reattendance (0=no, 1=yes)				
	Col 1	Col 2		
Intervention group (vs control group)	-1.5 (1.3)	-0.6 (1.2)		
Age of patient at initial attendance (0-4)		-2.3*** (0.4)		
Female (vs male) patient at initial attendance		0.2 (1.2)		
St Mary's (vs Northwick Park)		-0.4 (1.5)		
Miles between patient home and hospital		-1.1*** (0.4)		
Index of multiple deprivation (1-5)		0.1 (0.5)		
Ease of getting GP appointment		-0.1 (0.1)		
Nonurgent attendances 2014-17 (pre-trial)				
None (baseline)		-		
1-3		7.0*** (1.4)		
4+		19.6*** (2.4)		
Constant	24.6*** (0.9)	16.5** (7.2)		
Attendances	5,168	4,831		
Families	3,932	3,685		
R-squared	0.00	0.21		

Coefficients and (standard errors) are presented in percentage points. Standard errors are clustered at the family-level. Analysis controls for month of attendance but this is omitted from table for brevity. *** p<0.01, ** p<0.05, * p<0.1

Adverse events

There were no adverse events associated with this trial.

Additional analyses demonstrated that the treatment had a null effect on the probability of any reattendance (urgent or nonurgent), and on the probably of urgent reattendances only. This latter result means that we can say, with reasonable confidence, that the treatment did not backfire and cause families to end up making a greater number of urgent attendances.