

Effects of case management on emergency service usage and mortality of people who call 999 frequently (STRETCHED): Emerging Results of linked data analysis

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Background: UK Ambulance services use multidisciplinary cross-service case management in some areas to help meet the needs of people who call 999 frequently, known as 'Frequent Callers'. We undertook a natural experiment comparing outcomes for people where this intervention is available with others in areas with standard care only.

Methods: We identified intervention and control sites within four UK ambulance services and included people meeting criteria for Frequent Caller lists during 2018. We linked ambulance service, hospital and mortality data and compared mortality; one or more emergency admissions; one or more ED presentations, and one or more further 999 calls at 6 months as a composite primary outcome.

Results: Data on 1,220 people were submitted for linkage; 37 people were lost to follow-up or excluded from analysis, leaving 1,183 (550 intervention; 633 control) included in analysis. Baseline demographics and service use were similar between intervention and control arms, except median age (60 years intervention; 69 control).

No statistically significant differences between study arms were detected for the composite primary outcome (95.6% intervention; 94.9% control; adjusted odds ratio=1.013, 95% CI=0.748-1.372), mortality (10.5% intervention; 14.1% control; aOR=0.713, 95% CI=0.465-1.093), emergency admissions (67.5% intervention; 66.7% control; aOR=1.114, 95% CI=0.831-1.492), ED presentations (76.9% intervention, 73.9% control; aOR=1.088, 95% CI=0.763-1.551) and further 999 calls (87.8% intervention; 86.1% control; aOR=1.197, 95% CI=0.794-1.805).

Conclusion: Emerging findings suggest no clear overall effects on service use or mortality between study arms. Mortality was high in this group. Analysis of secondary outcomes (including case management referral and conveyance rates), health economics and qualitative analyses are ongoing.

STRENGTHS: High linkage rate for included people allows a more complete picture of outcomes than 999 data alone.

LIMITATIONS: Not a randomised trial – other local confounding factors may be important.