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Paper:

Snooks, H., Anthony, R., Chatters, R., Dale, J., Fothergill, R., Gaze, S., Halter, M., Humphreys, I., Koniotou, M., et. al. (2017). Paramedic Assessment of Older Adults After Falls, Including Community Care Referral Pathway: Cluster Randomized Trial. *Annals of Emergency Medicine*, 70(4), 495-505.e28.
<http://dx.doi.org/10.1016/j.annemergmed.2017.01.006>

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Paramedic Assessment of Older Adults After Falls, Including Community Care Referral Pathway: Cluster Randomized Trial



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Study objective: We aim to determine clinical and cost-effectiveness of a paramedic protocol for the care of older people who fall.

Methods: We undertook a cluster randomized trial in 3 UK ambulance services between March 2011 and June 2012. We included patients aged 65 years or older after an emergency call for a fall, attended by paramedics based at trial stations. Intervention paramedics could refer the patient to a community-based falls service instead of transporting the patient to the emergency department. Control paramedics provided care as usual. The primary outcome was subsequent emergency contacts or death.

Results: One hundred five paramedics based at 14 intervention stations attended 3,073 eligible patients; 110 paramedics based at 11 control stations attended 2,841 eligible patients. We analyzed primary outcomes for 2,391 intervention and 2,264 control patients. One third of patients made further emergency contacts or died within 1 month, and two thirds within 6 months, with no difference between groups. Subsequent 999 call rates within 6 months were lower in the intervention arm (0.0125 versus 0.0172; adjusted difference -0.0045 ; 95% confidence interval -0.0073 to -0.0017). Intervention paramedics referred 8% of patients (204/2,420) to falls services and left fewer patients at the scene without any ongoing care. Intervention patients reported higher satisfaction with interpersonal aspects of care. There were no other differences between groups. Mean intervention cost was \$23 per patient, with no difference in overall resource use between groups at 1 or 6 months.

Conclusion: A clinical protocol for paramedics reduced emergency ambulance calls for patients attended for a fall safely and at modest cost. [Ann Emerg Med. 2017;70:495-505.]

Please see page 496 for the Editor's Capsule Summary of this article.

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<http://dx.doi.org/10.1016/j.annemergmed.2017.01.006>

INTRODUCTION

Background

Falls in older people are an important issue internationally,^{1,2} with high human and organizational costs. It is estimated that approximately 30% of home-dwelling people aged 65 years or older fall every year.³⁻⁵ Falls are associated with high mortality, morbidity, and immobility.⁵ Recovery from fall injury is often delayed in older people, which increases the risk of subsequent falls.⁵ In the United Kingdom, falls account for 3% (approximately \$1,312 [£980] million) of total National Health Service (NHS) expenditure,⁶ and the prevention of falls in older people has been highlighted as a priority.⁷

Population growth and ageing, the increasing burden of chronic disease, and shortage of health care workers are affecting health care systems in many countries.⁸ NHS emergency departments (EDs) are under considerable pressure, and crowding is a major international problem with negative consequences for both patients and providers.

Emergency ambulances (999) are frequently called for older people who have fallen, composing 8% of emergency ambulance attendances in London, UK,⁹ with a similar proportion reported in urban emergency medical services in the United States.¹⁰ In the United Kingdom, United States, and Australia,¹¹ nonconveyance rates are high for this group;

Editor's Capsule Summary*What is already known on this topic*

Falls are a common reason for older adults to seek emergency care.

What question this study addressed

This cluster randomized trial assessed a protocol in which paramedics referred low-risk patients to a fall prevention service without transport to the emergency department (ED).

What this study adds to our knowledge

Eight percent of intervention patients were referred without ED transport. The primary outcome, death or repeated emergency care in the first month, was not different between intervention (n=2,391) and control (n=2,264) patients (36.4% versus 37.2%). Intervention patients reported higher satisfaction with care and were less likely to call an ambulance in the first month.

How this is relevant to clinical practice

These results establish the feasibility and suggest the safety of a protocol in which paramedics assess older adults who fall and refer low-risk patients to a fall prevention service without ED transport.

for example, in London the figure is approximately 40%,⁹ despite the known safety and litigation risk.¹²

Clinical guidelines for preventing falls strongly advocate approaches based on multidimensional risk assessment and exercise programs, with environmental assessment and modification.¹³ A 2004 systematic review judged that multifactorial interventions were effective,¹⁴ although a more recent meta-analysis was equivocal.¹⁵ None of these studies included patients who had been identified in an out-of-hospital setting, in which the population of older people who fall is known to exhibit higher vulnerability for further falls.¹⁶ A recent study found that, for older people who had been left at home by their attending ambulance clinicians after a fall, referral to a community-based falls prevention service reduced further falls, improved clinical outcomes,¹⁷ and was cost-effective.¹⁸ Previous studies in the emergency out-of-hospital setting have found that new pathways of care are difficult to implement because of difficulty in changing clinician behavior.¹⁹

Importance

Services are implementing new models of care for patients who may not need immediate care at the ED.²⁰ Although

there is evidence that multidisciplinary assessment and care can improve outcomes for older people who fall, it is not known whether ambulance paramedics can safely triage and leave patients at the scene (without conveyance to the ED) for follow-up care in the community or whether this intervention will improve outcomes for patients and be cost-effective. Evidence is needed to inform clinical and policy development internationally for this important, growing, vulnerable group.

Goals of This Investigation

We carried out a cluster randomized trial to assess the benefits and NHS costs of a complex intervention comprising education, clinical protocol, and pathway, enabling paramedics to assess older people after a fall and refer them to community-based falls services when appropriate. Our primary outcome was further emergency health care contacts or death.

MATERIALS AND METHODS**Study Design and Setting**

We conducted the Support and Assessment for Fall Emergency Referrals (SAFER) 2 trial in geographically defined sites within 3 UK ambulance services. We randomly allocated ambulance stations, not patients, because the intervention included training for ambulance paramedics that they could not later suppress. We chose to allocate stations so that ambulance services could support paramedics based at intervention stations while minimizing contamination of practice of those based at control stations.

Selection of Participants

We invited paramedics based at study stations to participate in the trial before stratifying those stations by site, associated falls service, number of participating paramedics, and volume of calls, and allocating stations at random between intervention and control groups. We informed participating paramedics of their group allocation (the same as their base station). If paramedics changed station within the trial recruitment period, they retained their original allocation. Ambulance crews normally work in pairs, usually one paramedic and one emergency medical technician, with the paramedic leading on care. We allocated exceptional cases when a control paramedic and intervention paramedic were rostered together to the intervention arm of the trial.

The 3 ambulance services used similar information systems. We included patients once during the trial period who were attended by a trial paramedic after a 999 call to the ambulance service coded by a dispatcher as a fall

without priority symptoms (chest pain, difficulty breathing, changes in level of consciousness, or severe hemorrhage), aged 65 years or older, and resident in the catchment area of participating falls services. We did not ask paramedics to approach patients for consent to participate in the trial during the emergency episode. Instead, we sought deferred consent from patients by post and telephone for follow-up through routine medical records and by postal questionnaire, excluding patients who declined (dissented). The Health Research Authority Confidentiality Advisory Group permitted us to monitor patients whom we could not contact, or who did not respond, through anonymized routine data.

Service users contributed to all levels of trial design and management at all sites. We used various approaches to include views of the target population of frail elderly patients, including meeting service users outside the formal management structures of the trial, individually or through existing community groups. Our approach to service user involvement in this trial is published elsewhere.²¹

Interventions

We evaluated a clinical protocol (Figure 1) for the care of older people who have fallen that enabled ambulance paramedics to assess them and, when appropriate, refer them to community-based falls services rather than transport them to the ED. The protocol formed the core element of a complex intervention that included other defined elements; specifically, paramedic training, referral pathway and processes, falls service response, and ongoing clinical support. The protocol provided support to the paramedics to assess patients and, when appropriate, to leave them at the scene, with a referral to falls services who would make contact during the following week to continue care, without attendance at or involvement of the ED. At the outset of the trial, we held a meeting attended by the research team and local collaborators, with representation from each ambulance service, as well as ED clinicians and falls service providers, to define all components of the intervention. Essential features, eg, the training package and clinical protocol, or features that could vary locally, eg, processes for handling referrals and documentation, were agreed.

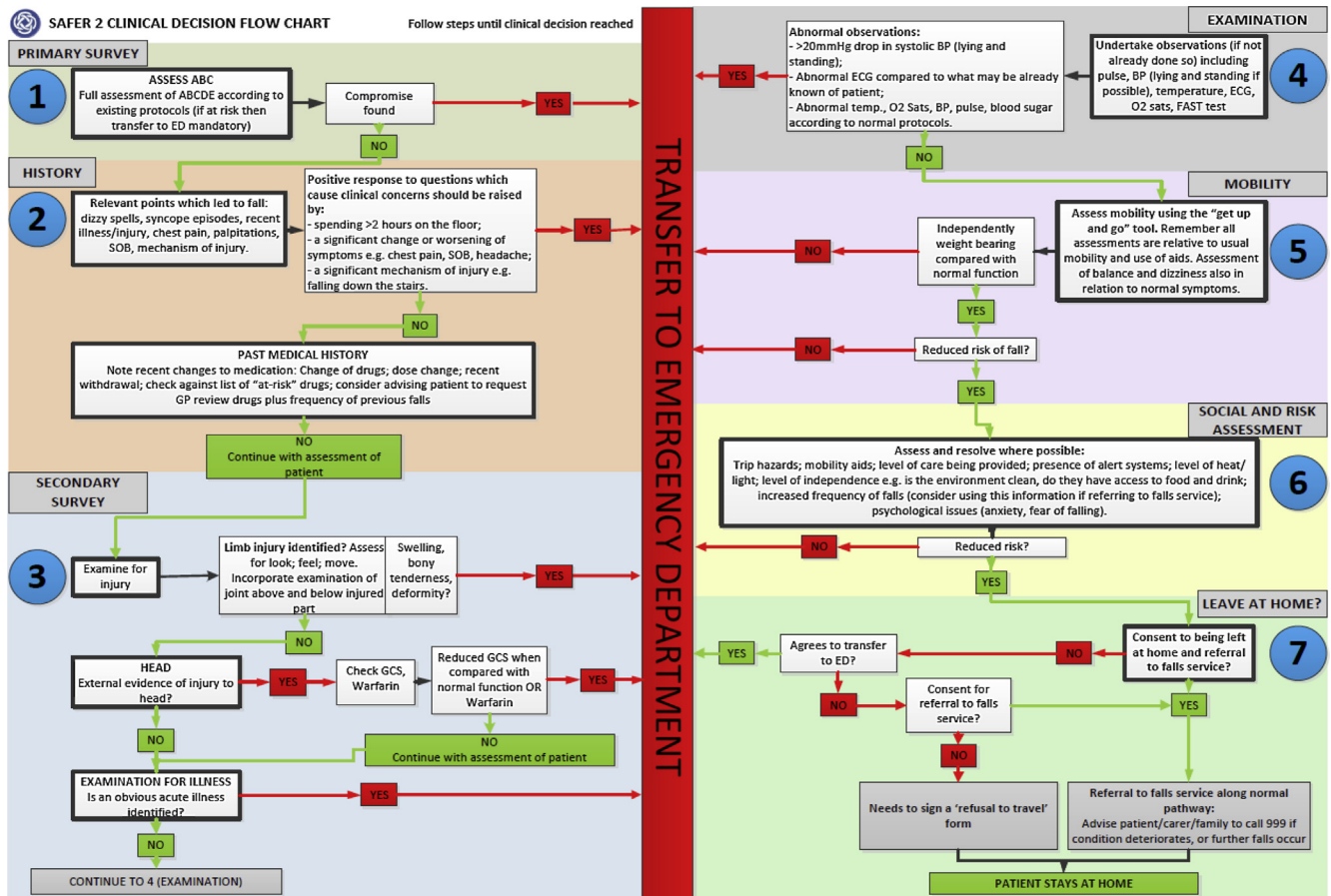


Figure 1. Clinical decision flow chart.

We asked paramedics based at control stations to continue their usual practice, including assessment of injuries or other conditions requiring immediate care, assistance in moving, and conveyance to the ED unless the patient refused.

Outcome Measures

We selected outcome measures consistent with the recommendations of the Prevention of Falls Network Europe.²² The primary outcome (source: routinely collected linked data) was subsequent emergency events within 1 and 6 months of recruitment (death, emergency admissions, ED attendances, and 999 calls).

Secondary outcomes at the index event (source: routinely collected ambulance service data) were disposal (conveyed to the ED, referred to falls service, or left at scene with no referral), clinical documentation completion rates, duration of ambulance service job cycle (from the call to time when the ambulance was free for the next call), and episode of care (from the call to the time when the patient was left at home, discharged from the ED, or admitted to the hospital).

Secondary outcomes at 1 and 6 months after index event were self-reported further falls (source: patient questionnaires), further fractures (source: routinely collected linked hospital data), days spent in the hospital (source: routinely collected linked hospital data), health-related quality of life according to the 12-Item Short-Form Health Survey,²³ “fear of falling” according to the modified Falls Efficacy Scale,²⁴ and costs of care.

Secondary outcomes 1 month after index event only were patient satisfaction according to the Quality of Care Monitor.²⁵

We defined a serious adverse event as a 999 call, ED attendance, emergency hospital admission, or death occurring within 2 days of the index incident. We investigated and reported patients’ complaints, other complaints, and coroners’ inquests that asked the ambulance service about nonconveyance of a trial participant as potential serious adverse reactions.

Methods of Measurement

Patients were identified as being potentially eligible for study inclusion from routine 999 dispatch records through standardized queries written for each site. Site researchers confirmed eligibility of individual patients by retrieving patient report forms, which were routinely completed by paramedics when they attended a patient. The forms included patient identifiers and demographics, as well as operational, clinical assessment, and treatment information. We did not ask paramedics to approach patients for

consent to participate in the trial during the emergency episode. Instead, after identification of eligible patients we sought deferred consent for follow-up through routine medical records and postal questionnaire. After discussion with the research ethics committee, our consent process included contacting patients by post and then, if necessary, by telephone or home visit. We did not attempt to contact nonresponders to the 1-month questionnaire at 6 months. Only participants who actively dissented were excluded from analysis of anonymized linked routine outcomes.

For primary and secondary outcomes derived from routine health data, our trial partners in the 3 ambulance services separated identifying from clinical information included in patient report forms and sent the split files to the National Health Service Wales Informatics Service or the English Health and Social Care Information Centre, who matched the patients to their central administrative registers and retrieved and transferred clinical outcome data into the Secure Anonymised Information Linkage²⁶ gateway at Swansea University, where we linked them to questionnaire data for analysis.

To minimize bias, we kept the trial statistician and all other trial management group members blind to allocations. Unblinding occurred once primary analyses were complete.

We estimated our trial sample size from our primary outcome. From a recent systematic review of trials of interventions for older people who fall and present for emergency treatment,²⁷ we conservatively estimated that trial patients had a 50% chance of dying or making another emergency contact within 6 months. Allowing for an intracluster correlation of 0.002, we aimed to recruit 6,290 participants (25 clusters averaging 251.6 participants), yielding power more than 90% to detect a change of 0.18 in the mean number of emergency contacts during 6 months (estimated at 1.8, with SD 1.5), or a difference of one emergency contact in 10 avoided or induced by the intervention. Two thirds the number of these participants (n=4,193) would have 80% power to detect this difference.

Primary Data Analysis

Our primary analyses by treatment allocated followed the analysis plan agreed with the data monitoring and ethics committee, and best practice in pragmatic trials. We considered approaches to analysis by treatment received, but because the intervention was the clinical protocol for assessment and decisionmaking for older people attended after a fall, care options included transportation to the ED, as well as leaving the patient at home with referral to falls service. We were not able to determine when the protocol

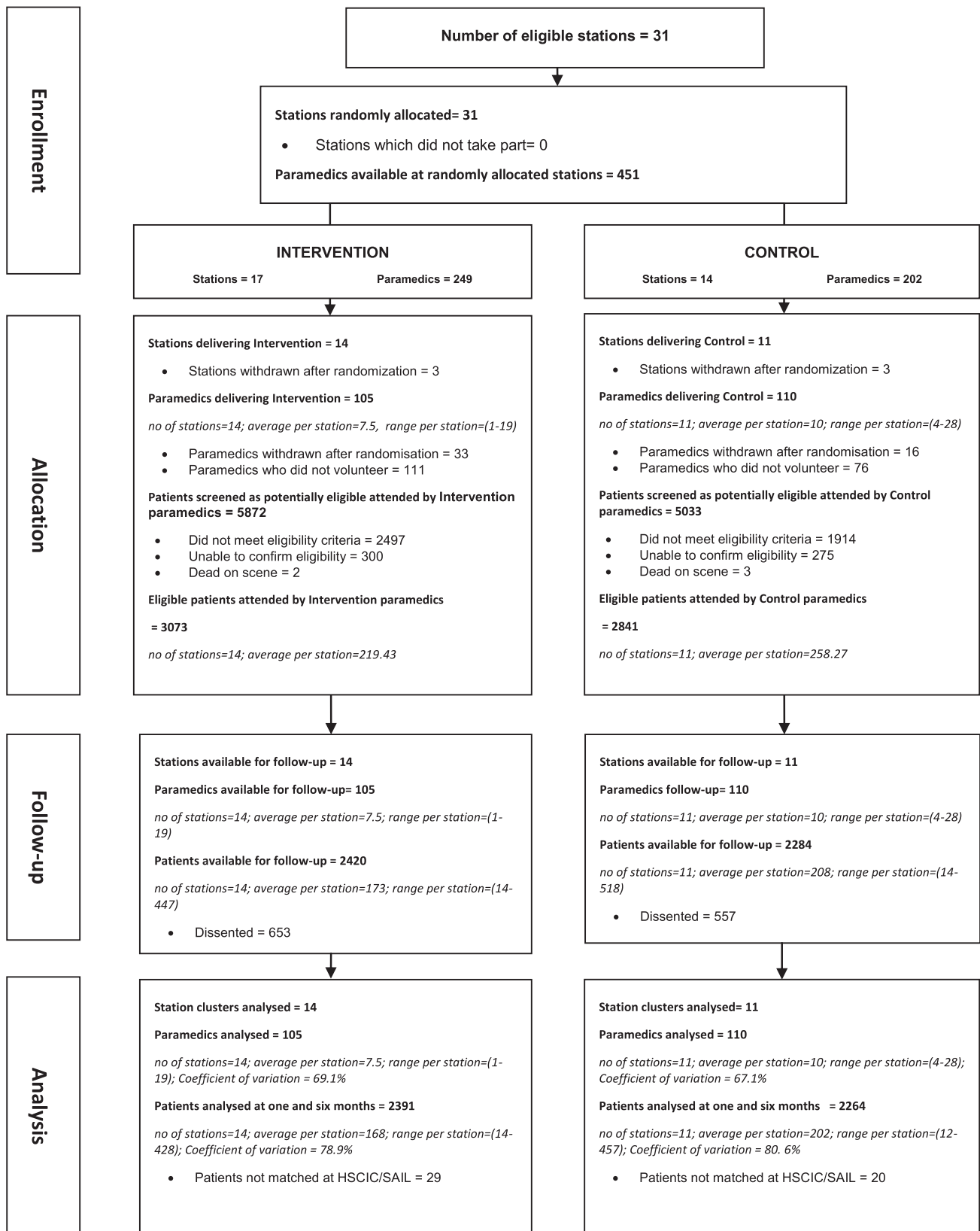


Figure 2. Flow of clusters and individuals through the randomized trial.

had been used to support decisionmaking and could not identify a similar group for comparison if we focused on those referred. Analyses included logistic regression for binary outcomes, negative binomial regression for count outcomes, and linear models for measurement and log-transformed variables. We used multilevel modeling to estimate (random) station effects and (fixed) group effects. Because our primary outcome was hierarchic, we analyzed the components separately and incrementally: first, deaths; second, emergency admissions plus deaths; third, ED attendances plus admissions and deaths; and fourth, 999 calls plus attendances, admissions, and deaths. Covariates included distance between the site of the incident and the nearest ED, patient age and sex, whether the 999 call was “out of (general practitioner) hours,” and time since recruitment started.

We undertook a cost analysis from the perspective of the UK NHS and personal social services. We estimated the costs of providing the intervention from financial reports; other relevant routine information, including resource use sheets and patient records; and discussions with finance staff. We estimated NHS resource use from routine data. We derived unit costs from the Personal Social Services Research Unit Costs of Health and Social Care 2012²⁸ and NHS reference costs 2011 to 2012.²⁹

We amended trial processes to include incentives to improve recruitment and response rates: a £50 voucher per paramedic who signed up and £5 voucher for each patient, which was included in the invitation pack.

We obtained ethical approval from the Research Ethics Committee for Wales, information governance approval from the National Information Governance Board, and NHS research and development approval from each participating NHS organization.

RESULTS

Between March 2011 and June 2012, 215 paramedics based at 25 ambulance stations across the 3 study sites attended 5,914 eligible patients (Figure 2). Six of 31 eligible stations withdrew after randomization, but before the start of patient recruitment, in response to the introduction of a conflicting intervention in one area of site 2. After exclusion of 1,210 (20%) dissenting patients, 4,704 (80%) were available for follow-up, 2,420 in the intervention group and 2,284 in the control group (Table 1). Because the National Health Service Wales Informatics Service or the Health and Social Care Information Centre subsequently matched all but 49 patients, we included 4,655 patients in primary outcome analyses.

Recruitment of patients was higher at site 1 owing to a longer recruitment period there, loss of 6 stations at site 2,

Table 1. Baseline demographic and clinical characteristics for patients and clusters.

| Variables, Individual Level | Intervention | Control |
|--|---|--|
| All sites | 2,420 | 2,284 |
| Site 1 | 1,329 | 1,352 |
| Site 2 | 544 | 436 |
| Site 3 | 547 | 496 |
| Mean age (SD) [n], y | | |
| All sites | 82.54 (7.97) [2,412] | 82.14 (8.11) [2,275] |
| Site 1 | 82.99 (7.81) [1,328] | 82.57 (7.91) [1,352] |
| Site 2 | 82.78 (7.97) [537] | 81.79 (8.60) [427] |
| Site 3 | 81.20 (8.21) [547] | 81.28 (8.16) [496] |
| Female patients, proportion (%) | | |
| All sites | 1,480/2,419 (61.2) | 1,477/2,284 (64.7) |
| Site 1 | 816/1,329 (61.4) | 882/1,352 (65.2) |
| Site 2 | 351/543 (64.6) | 292/436 (67.0) |
| Site 3 | 313/547 (57.2) | 303/496 (61.1) |
| 999 index call out of hours, proportion (%) | | |
| All sites | 1,012/2,419 (41.8) | 954/2,282 (41.8) |
| Site 1 | 624/1,328 (47.0) | 626/1,352 (46.3) |
| Site 2 | 221/544 (40.5) | 174/436 (39.9) |
| Site 3 | 167/547 (30.5) | 154/494 (31.2) |
| Distance to ED, mean (SD) [n], miles | | |
| All sites | 4.77 (3.43) [2,406] | 4.65 (3.08) [2,270] |
| Site 1 | 5.03 (3.09) [1,329] | 5.04 (2.61) [1,352] |
| Site 2 | 7.33 (3.38) [542] | 6.75 (3.65) [434] |
| Site 3 | 1.55 (0.74) [535] | 1.71 (0.72) [484] |
| Days since start of trial, mean (SD) [n] | | |
| All sites | 221.8 (129.0) [2,420] | 220.8 (129.2) [2,284] |
| Site 1 | 239.4 (136.4) [1,329] | 238.1 (132.9) [1,352] |
| Site 2 | 217.4 (128.8) [544] | 227.0 (128.7) [436] |
| Site 3 | 183.4 (98.6) [547] | 168.3 (102.9) [496] |
| Variables, cluster level | Intervention, station n (paramedics n) | Control, station n (paramedics n) |
| All sites | 14 (105) | 11 (110) |
| Site 1 | 5 (39) | 4 (38) |
| Site 2 | 5 (26) | 4 (26) |
| Site 3 | 4 (40) | 3 (46) |
| Recruited paramedics/station, mean (SD) | | |
| All sites | 7.5 (5.2) | 10.0 (6.7) |
| Site 1 | 7.8 (5.0) | 9.5 (4.2) |
| Site 2 | 5.2 (3.0) | 6.5 (2.1) |
| Site 3 | 10.0 (7.3) | 15.3 (11.2) |

and operational practice that took paramedics out of the trial catchment area, particularly in site 3 (Table 2).

The mean age of participants was 82 years, with little difference between groups. Sixty-three percent of trial participants were women, slightly higher in the intervention than the control group at each site. Forty-two percent of calls were out of (general practitioner) hours calls, which was similar between trial arms. There was little difference between groups in mean distance from the incident to the

Table 2. Outcomes at 1 and 6 months, analyzed by treatment allocated.

| Primary Outcome: 1 Month | Intervention, No. (%) | Control (Usual Care), No. (%) | Adjusted Comparison*† (95% CI) |
|--|---------------------------------------|---------------------------------------|--|
| Composite: patients who died or with further emergency admission, ED attendance, or 999 call | 870/2,391 (36.4) | 843/2,264 (37.2) | OR=0.956 (0.848 to 1.077) |
| Number and proportion | | | |
| Died | 147/2,391 (6.1) | 136/2,264 (6.0) | OR=0.994 (0.780 to 1.266) |
| ≥1 further emergency admission | 517/2,391 (21.6) | 475/2,264 (21.0) | OR=1.039 (0.903 to 1.196) |
| ≥1 further ED attendance | 463/2,391 (19.4) | 418/2,264 (18.5) | OR=1.067 (0.920 to 1.237) |
| ≥1 further 999 call | 442/2,391 (18.5) | 493/2,264 (21.8) | OR=0.815 (0.705 to 0.943) |
| | Mean rate [n[‡]] (SD) | Mean rate [n[‡]] (SD) | |
| Further ED attendances per patient per day at risk | 0.0236 [2,197] (0.1018) | 0.0223 [2,093] (0.0833) | Δ=0.0011 (-0.0045 to 0.0066) Δ _L =0.0436 (-0.0609 to 0.1481) |
| Further 999 calls per patient per day at risk | 0.0204 [2,197] (0.0641) | 0.0245 [2,093] (0.0814) | Δ=-0.0040 (-0.0083 to 0.0003) Δ _L =-0.1354 (-0.2418 to 0.0290) |
| Primary outcome, 6 mo | No. (%) | No. (%) | |
| Composite: patients who died or with further emergency admission, ED attendance, or 999 call | 1,701/2,391 (71.1) | 1,592/2,264 (70.3) | OR=1.018 (0.895 to 1.157) |
| Number and proportion | | | |
| Died | 485/2,391 (19.2) | 419/2,264 (18.5) | OR=1.187 (0.971 to 1.451) |
| ≥1 further emergency admission | 1,153/2,391 (48.2) | 1,084/2,264 (47.9) | OR=1.001 (0.891 to 1.125) |
| ≥1 further ED attendance | 1,079/2,391 (45.1) | 1,021/2,264 (45.1) | OR=0.999 (0.888 to 1.123) |
| ≥1 further 999 call | 1,046/2,391 (43.7) | 1,046/2,264 (46.2) | OR=0.899 (0.799 to 1.011) |
| | Mean rate [n[‡]] (SD) | Mean rate [n[‡]] (SD) | |
| Further ED attendances per patient per day at risk | 0.0169 [2,380] (0.09907) | 0.0144 [2,257] (0.0686) | Δ=0.0025 (-0.0021 to 0.0071) Δ _L =-0.0163 (-0.1024 to 0.0699) |
| Further 999 calls per patient per day at risk | 0.0125 [2,380] (0.0363) | 0.0172 [2,257] (0.0599) | Δ=-0.0045 (-0.0073 to -0.0017) Δ _L =-0.1183 (-0.2079 to -0.0286) |

CI, Confidence interval; OR, odds ratio.

*As well as indicators for group, site, and their interaction, core factors and covariates considered are age (in years) and its square, distance to the ED (in miles), recruitment point (based on days since the start of the study), seasonality, indicators of sex, and whether the index call was made during out of (general practitioner) hours.

†The comparison between groups reflects the variable under consideration; specifically, we report an OR from logistic regression models for binary variables, or an additive group effect (Δ, in the same units as the dependent variable; Δ_L refers to log-transformed data, using ln[y+0.001] in place of y) from linear models for measurement variables.

‡Patients with at least 1 day at risk.

ED, approximately 3 miles, but it was much shorter at the urban site 3 (Table 1).

Excluding individuals who did not consent to questionnaires and those who died, the response rate for self-reported outcomes was 36.5% at 1 month and 58.7% at 6 months, with little difference between intervention and control groups but considerable variation between sites (at 1 month, 30.0% to 51.1%; at 6 months, 53.6% to 73.8%).

Main Results

More than one third of patients had experienced a further emergency episode or death by 1 month, increasing to more than two thirds by 6 months, with no difference between trial arms. Intervention patients made fewer subsequent 999 calls by 1 and 6 months (from 21.8% in the control arm to 18.5% in the intervention arm, and from 46.2% to 43.7%) (Table 2 and Table E1 [available online at <http://www.annemergmed.com>]). Although ED attendances per participant decreased in the intervention arm, this was not significant once we had adjusted for number of days at risk.

Intracluster correlation coefficients for variables recorded at both 1 and 6 months were generally low: less than 0.001 for the primary outcome, less than 0.005 for the majority of its components, and no greater than 0.010 and 0.0254 at 1 and 6 months, respectively.

Table 3 and Table E2 (available online at <http://www.annemergmed.com>) shows similar rates of conveyance to the ED in both groups at the index incident. Eight percent of patients were referred to falls services by their attending paramedic in the intervention arm compared with 1% in the control arm. In the intervention group, fewer patients were left at the scene without any ongoing care. Patients in the intervention group reported higher satisfaction with interpersonal aspects of care. We found no clear differences between trial arms in completeness of clinical documentation, duration of job cycle or episode of care, subsequent fractures, or health-related quality of life at 1 or 6 months. Mean length of stay was longer for intervention patients at 1 month, a difference that had disappeared at 6 months.

Table 3. Secondary outcomes at the index event and 1 and 6 months, analyzed by treatment allocated.

| | Intervention | Control (Usual Care) | Adjusted Comparison*† (95% CI) |
|--|-----------------------|-----------------------|--------------------------------|
| At index event | | | |
| Number and proportion | No. (%) | No. (%) | |
| Conveyed to ED‡ | 1,579/2,420 (65.2) | 1,431/2,284 (62.7) | OR=1.082 (0.958 to 1.223) |
| Referred to falls service‡ | 204/2,420 (8.4) | 26/2,284 (1.1) | OR=51.730 (16.46 to 162.54) |
| Left at scene without any referral | 547/2,420 (22.6) | 692/2,284 (30.3) | OR=0.686 (0.6000 to 0.784) |
| Number and proportion with recorded | | | |
| Respiratory rate | 2,318/2,420 (95.8) | 2,165/2,284 (94.8) | OR=1.278 (0.963 to 1.695) |
| Pulse rate | 2,319/2,420 (95.8) | 2,173/2,284 (95.1) | OR=1.216 (0.910 to 1.624) |
| Level of consciousness | 2,327/2,420 (96.2) | 2,189/2,284 (95.8) | OR=1.058 (0.790 to 1.418) |
| | Mean [n] (SD) | Mean [n] (SD) | |
| Duration of job cycle, min | 99.9 [2,416] (41.9) | 97.8 [2,277] (43.9) | Δ=1.685 (-0.746 to 4.117) |
| Duration of episode of care, min | 196.8 [2,410] (153.9) | 192.8 [2,273] (152.8) | Δ=2.048 (-6.68 to 10.77) |
| At 1 mo | | | |
| | No. (%) | No. (%) | |
| Number and proportion with further | | | |
| Self-reported falls | 413/621 (66.5) | 409/589 (69.4) | OR=0.723 (0.544 to 0.961) |
| Fractures | 98/2,391 (4.1) | 91/2,264 (4.0) | OR=1.002 (0.744 to 1.351) |
| | Mean [n] (SD) | Mean [n] (SD) | |
| Days spent in hospital | 7.56 [2,391] (10.69) | 6.90 [2,264] (10.34) | Δ=2.005 (0.894 to 3.117) |
| SF12 MCS | 39.80 [447] (12.47) | 38.89 [410] (12.16) | Δ=0.902 (-0.744 to 2.547) |
| SF12 PCS | 29.07 [447] (9.97) | 29.40 [410] (10.28) | Δ=-0.495 (-1.847 to 0.856) |
| Modified Falls Efficacy Scale | 3.714 [634] (3.040) | 3.815 [600] (3.117) | Δ=-0.055 (-0.385 to 0.275) |
| QCM Technical | 62.82 [563] (7.98) | 63.21 [551] (8.16) | Δ=-0.320 (-1.265 to 0.625) |
| QCM Interpersonal | 68.92 [563] (8.66) | 68.04 [551] (9.12) | Δ=3.132 (1.587 to 4.678) |
| At 6 mo | | | |
| | No. (%) | No. (%) | |
| Number and proportion with further | | | |
| Self-reported falls | 228/329 (69.3) | 192/296 (64.9) | OR=1.495 (1.014 to 2.205) |
| Fractures | 228/2,391 (9.5) | 222/2,264 (9.8) | OR=1.449 (1.076 to 1.952) |
| | Mean [n] (SD) | Mean [n] (SD) | |
| Days spent in hospital | 18.74 [2,391] (28.82) | 18.56 [2,264] (29.12) | Δ=-0.291 (-1.932 to 1.350) |
| SF12 MCS | 43.21 [258] (12.57) | 42.82 [241] (12.28) | Δ=0.463 (-1.717 to 2.643) |
| SF12 PCS | 30.44 [258] (11.33) | 31.88 [241] (11.67) | Δ=-1.300 (-3.282 to 0.682) |
| Modified Falls Efficacy Scale | 4.547 [341] (3.328) | 4.792 [310] (3.393) | Δ=-0.230 (-0.729 to 0.270) |

SF12 MCS, 12-Item Short-Form Health Survey Mental Component Summary; SF12 PCS, 12-Item Short-Form Health Survey Physical Summary; QCM, quality of care monitor.

*As well as indicators for group, site, and their interaction, core factors and covariates considered are age (in years) and its square, distance to the ED (in miles), recruitment point (based on days since the start of the study), seasonality, indicators of sex, and whether the index call was made during out of (general practitioner) hours.

†The comparison between groups reflects the variable under consideration; specifically, we report an OR from logistic regression models for binary variables and an additive group effect (Δ, in the same units as the dependent variable) from linear models for the measurement variable.

‡Some patients were conveyed and referred (intervention group n=34; control group n=18).

Intracluster correlation coefficients for variables recorded at both 1 and 6 months were again generally low, ranging from 0 to 0.117 at 1 month and from 0 to 0.0259 at 6 months, but higher (typically approximately 0.05) for variables recorded at the index incident.

Sixty percent of intervention group paramedics (n=64/105) referred trial-eligible patients to a falls service, varying by site from 48% to 70%. Most referred once (n=25) or twice (n=14), up to a maximum of 11 referrals. Patient age, sex, and distance to the ED did not influence likelihood of referral; however, patients were more likely to be referred to falls services out of usual service hours and less likely to be referred at site 1 than the other sites (Table 4).

There was little difference in the rate of occurrence of serious adverse events between intervention and control groups within 2 days of the index incident in 999 calls (101/2,420 versus 117/2,284; 4.2% versus 5.1%), ED attendances (78/2,420 versus 92/2,284; 3.2% versus 4.0%), emergency admissions to the hospital (133/2,420 versus 109/2,284; 5.5% versus 4.8%), deaths (19/2,420 versus 16/2,284; 0.8% versus 0.7%), or in the total number of events (331/2,294 versus 334/2,284; 13.7% versus 14.6%). There were no serious adverse reactions during the trial.

The costs of the SAFER 2 intervention amounted to \$56,031, \$23 per eligible patient. These costs included

Table 4. Predictors of falls referral (full-effects model).

| Predictor* | B | OR | 95% CI for OR | |
|-------------------|--------|-------|---------------|-------|
| | | | Lower | Upper |
| Site 1 | -0.448 | 0.639 | 0.446 | 0.917 |
| Site 3 | 0.204 | 1.226 | 0.771 | 1.951 |
| Sex | 0.101 | 1.107 | 0.832 | 1.472 |
| Age ² | -1.702 | 0.182 | 0.026 | 1.264 |
| Distance to ED | -0.041 | 0.960 | 0.910 | 1.013 |
| Out of hours | 0.456 | 1.578 | 1.202 | 2.072 |
| Recruitment point | -0.217 | 0.805 | 0.472 | 1.373 |
| Seasonality | 0.187 | 1.206 | 0.987 | 1.474 |
| Constant | -3.586 | | | |

*Predictors are indicators (0 or 1) for sites 1 and 3, sex (1 denoting female patient) and out of hours (1 denoting evenings, nights, weekends, and public holidays), and values of age squared (in years); distance to the ED (in miles); recruitment point (based on days since the start of the study); and seasonality (sine-based values from -1 to 1, with negative values in winter and positive values in summer).

local agreement of protocol between the ambulance service and partner falls services (\$3,782), setup and implementation of referral process at each service (\$1,483), production of training materials (\$1,600), training of trainers and paramedics (\$44,436), clinical support to change practice (\$1,858), and feedback on referrals from falls services (\$2,872).

There were no significant differences in overall health care costs at 1 or 6 months (Table 5), with additional expenditure of \$254 (95% confidence interval -\$19 to \$528) per participant in the intervention arm at 1 month and \$32 (95% confidence interval -\$627 to \$691) at 6 months after adjusting for statistically significant covariates. However, costs of subsequent 999 calls were significantly

lower at 1 month and costs of ED attendances were significantly lower at 6 months.

LIMITATIONS

The SAFER 2 trial was a large-scale, multicenter, cluster randomized trial in the challenging setting of out-of-hospital emergency care. We almost met our recruitment target and, through retrieval of anonymized linked routine data outcomes, achieved a very high rate of inclusion; we reported our primary outcome for 80% of eligible patients, a much higher proportion than usually reported.³⁰ However, self-reported outcome results should be interpreted with caution because the response rate was very low, with a high risk of selection bias. This highlights the importance and value of the anonymized routine linked data outcomes.

Some aspects of the trial may limit the applicability of findings, in particular the current context of changing practice and competing service innovations for this patient group. At each trial site, we lost stations, paramedics, and patients after initial recruitment because of the changing environment in which the trial took place. We overcame these challenges, perhaps inevitable in a pragmatic trial in a dynamic service environment. We completed the trial with balanced groups and achieved a sample size sufficient to detect important effects related to the intervention.

Participation in the trial was not compulsory. We recruited approximately half of all eligible paramedics, who may be more keen or willing to change than others, potentially limiting generalizability of findings.

Table 5. Health care resource use during 6 months.

| | Intervention (n=2,391) | | Control (n=2,264) | |
|---------------------------------------|------------------------|---------------|-------------------|---------------|
| | Total Cost, \$ | Mean Cost, \$ | Total Cost, \$ | Mean Cost, \$ |
| 1-mo follow-up | | | | |
| Cost of index call up to 1 mo | 7,092,019 | 2,966 | 6,197,061 | 2,737 |
| Routine costs at 1 mo | 3,293,187 | 1,377 | 2,975,647 | 1,314 |
| Subsequent emergency service calls* | 178,789 | 77 | 191,753 | 85 |
| Subsequent ED attendances† | 90,869 | 38 | 84,873 | 38 |
| Self-reported costs at 1 mo (imputed) | 1,444,415 | 604 | 1,352,742 | 598 |
| Total costs by 1 mo‡ | 11,829,621 | 4,948 | 10,525,450 | 4,649 |
| 6-mo follow-up | | | | |
| Cost of index call up to 6 mo | 8,949,831 | 3,743 | 7,807,814 | 3,449 |
| Routine costs at 6 mo | 13,626,741 | 5,699 | 13,381,398 | 5,911 |
| Subsequent emergency service calls§ | 732,441 | 306 | 762,959 | 337 |
| Subsequent ED attendances | 309,663 | 130 | 317,197 | 140 |
| Self-reported costs at 6 mo (imputed) | 5,309,561 | 2,221 | 4,752,582 | 2,099 |
| Total costs by 6 mo¶ | 27,886,133 | 11,663 | 25,941,794 | 11,458 |

*Estimate of the intervention effect (in dollars from fitted linear model adjusting for statistically significant covariates) is Δ=-13.93 (95% CI -26.79 to -1.06).

†Estimate of the intervention effect (in dollars from fitted linear model adjusting for statistically significant covariates) is Δ=-6.48 (95% CI -14.45 to 1.48).

‡Estimated additional expenditure per participant in the intervention arm at 1 month of \$254.36 (95% CI -\$18.74 to \$527.45).

§Estimate of the intervention effect (in dollars from fitted linear model adjusting for statistically significant covariates) is Δ=-22.76 (95% CI -62.85 to 17.34).

||Estimate of the intervention effect (in dollars from fitted linear model adjusting for statistically significant covariates) is Δ=-29.37 (95% CI -54.67 to -4.09).

¶Estimated additional expenditure per participant in the intervention arm at 6 months was \$32.13 (95% CI -\$626.52 to \$690.78; P=.92).

DISCUSSION

We did not find any differences between trial arms in the composite primary outcome, but found evidence of a small reduction in subsequent 999 calls. Referral rates to falls services varied between paramedics and were lower than expected. We did not find clear evidence of differences in other secondary outcomes related to processes of care, further injuries, self-reported quality of life, satisfaction, or fear of falling. The intervention cost was \$23.13 per patient, with no difference in overall costs but lower mean costs in the intervention group related to subsequent emergency service calls at 1 month and ED attendances at 6 months.

With 3 participating ambulance services, 25 stations, more than 200 paramedics, and more than 10 community-based falls services, and with outcomes available for 80% of eligible patients, we are confident that findings are highly relevant to UK and similar health systems.

The SAFER 2 intervention was associated with a small reduction in the proportion of patients making further 999 calls and in the number of further calls made. However, this did not affect other parts of the emergency care system, a finding that is difficult to interpret. Patients in the intervention arm may have become more confident in managing themselves if they fell again, but the lack of effect at the ED suggests that the effect may be restricted to those not conveyed to the ED. Nevertheless, even a modest reduction in 999 calls in this population represents a success in out-of-hospital care, in which operational pressures are very high.

It is important to recognize that the clinical protocol covered assessment of all older fallers who met the study inclusion criteria, some of whom would need transportation to the ED for further investigation and care. We strove to encourage change in clinical practice, but variable referral rates suggested that uptake of the new referral pathway could have been greater, reflecting previous experience in out-of-hospital emergency trials.²⁰ We were unable to determine what an appropriate referral rate should have been. Low referral rates may have been due to reluctance to change practice, risk aversion favoring transport to the hospital, patients unwilling to be referred, and more people than expected already under the care of a falls team. Together with the greater size and heterogeneity of the SAFER 2 trial, these considerations may explain why our findings are less marked than previously reported.¹⁷

The SAFER 2 trial showed that ambulance services can introduce this new clinical pathway for older patients who fall without risk of harm, and with limited reductions in emergency ambulance workload and costs of emergency health care.

The authors acknowledge all the data providers who made anonymized data available for research; the Trial Steering Committee members (Chris Salisbury [chair], Chris Hartley-Sharpe, Greg Morgan, and Suzanne Wyatt); Jonathan Benger and the Data Monitoring and Ethics Committee members (Kerenza Hood [chair], Antony Bayer, John Belcher, and Colin Thomson); additional contributors to the study, Wai-Yee Cheung, Judith Phillips, Elizabeth Rees, and members of the service user panel, Graham Smith, and Alun Toghill; Richard Whitfield from the Welsh Ambulance Trust; and the cooperation of the participating ambulance services, paramedics, and falls services.

Supervising editor: Timothy F. Platts-Mills, MD, MSc

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Author contributions: HAS, JD, RTF, SG, MH, PL, RAL, SM, JN, JP, CP, ANS, MW, ITR, and conceived and designed the study. HAS is the guarantor of this article and responsible for the statistical analysis and writing process. All authors reviewed the final article. HAS takes responsibility for the paper as a whole.

All authors attest to meeting the four [ICMJE.org](http://www.icmje.org) authorship criteria: (1) Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work; AND (2) Drafting the work or revising it critically for important intellectual content; AND (3) Final approval of the version to be published; AND (4) Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Funding and support: By *Annals* policy, all authors are required to disclose any and all commercial, financial, and other relationships in any way related to the subject of this article as per ICMJE conflict of interest guidelines (see www.icmje.org). The authors have stated that no such relationships exist. Research funding was provided by National Institute for Health Research-Health Technology Assessment (HTA 07/01/21) and Swansea University, with additional support provided by Health and Care Research Wales.

Publication dates: Received for publication June 29, 2016.
Revisions received October 7, 2016, and October 26, 2016.
Accepted for publication January 5, 2017. Available online March 13, 2017.

Trial registration number: Current Controlled Trials ISRCTN 60481756

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- As well as indicators for group, sites, and their interaction, we considered the following “core” factors and covariates: age and its square (based on age in years at the index event), distance to ED (in miles), recruitment point (based on days since start of study), seasonality (defined with sine-based values, which range from -1 in winter to 1 in summer); indicators of sex, and whether the index call was made during out of (general practitioner [GP]) hours.
- Site factors are denoted as site 1 for site 1 and so on; age^2 denotes the square of age; interactions between variables are denoted with #; for instance, Group#Site1 denotes the interaction between group and site 1.
- For factors, we used the following indicators:
 - a. Group=0 for control patients; group=1 for intervention patients
 - b. Site1=1 for site 1 patients; site1=0 otherwise (with similar definitions for other sites)
 - c. Sex=0 for male patients; sex=1 for female patients
 - d. Out of hours=1 for events occurring outside standard (GP) hours; out of hours=0 otherwise
- The primary approach was to start with a model containing all covariates and then reduce these, one variable at a time, to obtain a final model in which all retained factors and covariates are statistically significant. This approach yielded the following tables, which outline progress from initial to final models. In practice, this modeling was accompanied by various exploratory and confirmatory analyses, further information on the relation between factors and covariates and the extent of missing data, and residual diagnostics. Occasionally, progress from one stage to the next (denoted by \sim) was based on detailed consideration of this supporting information.
- The reported comparison between groups reflects the variable under consideration; specifically, we report an OR from logistic regression models for binary or an additive group effect (in the same units as the dependent variable) from linear models for measurement variables.
- Analysis of transformed variables refers to log-transformed data, using $\ln(y+0.001)$ in place of y .
- We encountered few computational issues in fitting these models; very large ORs occurred in initial models for one secondary outcome (the proportion of patients referred to a falls service; see Table 3), so some CIs in these models are not reported (denoted by n/a).

Figure E1. Notes on the statistical modeling of outcomes at 1 and 6 months.

Table E1. Details of statistical modeling for outcomes at 1 and 6 months.

| At 1 month | | | | | | | | | | |
|---|---------------------------|--------------------------|--------------------------|--------------------------|---------------------------|----------------------------|--------------------------|----------------------------|---------------------------|--------------------------|
| Composite: Number and proportion of patients who died or with further emergency admission, ED attendance or 999 call | | | | | | | | | | |
| Factors and covariates | | | | | | | | | | |
| Model | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age² | Distance | Out-hor |
| 1 | -0.127 (-0.400, 0.146) | 0.146 (-0.088, 0.379) | 0.059 (-0.240, 0.357) | 0.057 (-0.258, 0.373) | 0.252 (-0.122, 0.626) | -0.231 (-0.356, -0.105) | 0.000 (-0.027, 0.026) | 0.185 (-0.586, 0.956) | -0.005 (-0.027, 0.017) | 0.162 (0.03, 0.288) |
| 2 | -0.127 (-0.400, 0.146) | 0.145 (-0.088, 0.379) | 0.059 (-0.240, 0.357) | 0.057 (-0.258, 0.373) | 0.252 (-0.122, 0.626) | -0.231 (-0.356, -0.105) | | -0.180 (-0.043, 0.4036) | -0.005 (-0.027, 0.017) | 0.162 (0.03, 0.288) |
| 3 | -0.084 (-0.221, 0.053) | 0.176 (0.012, 0.340) | 0.082 (-0.190, 0.353) | | 0.209 (-0.081, 0.499) | -0.231 (-0.356, -0.105) | | 0.179 (-0.044, 0.403) | -0.005 (-0.028, 0.017) | 0.162 (0.03, 0.288) |
| 4 | -0.085 (-0.222, 0.052) | 0.186 (0.029, 0.344) | 0.109 (-0.136, 0.354) | | 0.211 (-0.079, 0.501) | -0.232 (-0.357, -0.106) | | 0.179 (-0.044, 0.402) | | 0.162 (0.03, 0.288) |
| 5 | -0.103 (-0.233, 0.027) | 0.152 (0.015, 0.290) | | | 0.293 (0.069, 0.517) | -0.233 (-0.359, -0.108) | | 0.177 (-0.046, 0.400) | | 0.162 (0.03, 0.288) |
| 6 | -0.106 (-0.236, 0.024) | 0.142 (0.005, 0.278) | | | 0.302 (0.079, 0.562) | -0.234 (-0.359, -0.108) | | 0.176 (-0.047, 0.399) | | 0.162 (0.03, 0.288) |
| 7 | -0.105 (-0.234, 0.024) | 0.123 (-0.012, 0.259) | | | 0.286 (0.065, 0.507) | -0.227 (-0.350, -0.104) | | | | 0.165 (0.04, 0.287) |
| 8 | -0.091 (-0.219, 0.038) | | | | 0.199 (0.000, 0.398) | -0.228 (-0.351, -0.105) | | | | 0.174 (0.295) |
| 9 | -0.045 (-0.165, 0.075) | | | | | -0.231 (-0.354, -0.108) | | | | 0.163 (0.04, 0.284) |
| Number and proportion died | | | | | | | | | | |
| Factors and covariates | | | | | | | | | | |
| Model | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age² | Distance | Out-c hour |
| 1 | -0.023 (-0.575, 0.529) | 0.015 (-0.465, 0.495) | 0.148 (-0.458, 0.754) | 0.098 (-0.538, 0.734) | -0.127 (-0.889, 0.635) | -0.563 (-0.810, -0.316) | 0.041 (-0.018, 0.101) | -0.156 (-1.786, 1.474) | 0.014 (-0.030, 0.059) | 0.074 (-0.173, 0.321) |
| 2 | -0.034 (-0.459, 0.391) | | 0.136 (-0.326, 0.597) | 0.112 (-0.326, 0.551) | -0.116 (-0.793, 0.560) | -0.563 (-0.810, -0.316) | 0.041 (-0.018, 0.101) | -0.158 (-1.787, 1.471) | 0.014 (-0.030, 0.058) | 0.074 (-0.173, 0.321) |
| 3 | -0.035 (-0.459, 0.390) | | 0.132 (-0.323, 0.588) | 0.113 (-0.325, 0.551) | -0.115 (-0.791, 0.561) | -0.563 (-0.810, -0.316) | 0.041 (-0.018, 0.101) | -0.157 (-1.786, 1.471) | 0.014 (-0.030, 0.058) | 0.074 (-0.173, 0.321) |

Table E1. Continued.

| Number and proportion died | | | | | | | | | | |
|-----------------------------------|-------------------------------|--------------|--------------------------|--------------------------|---------------------------|----------------------------|-------------------------|------------------------|--------------------------|--------------------------|
| Model | Factors and covariates | | | | | | | | | |
| | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age² | Distance | Out-of-hour |
| 4 | -0.035 (-0.459, 0.390) | | 0.132 (-0.324, 0.587) | 0.114 (-0.324, 0.552) | -0.115 (-0.791, 0.561) | -0.563 (-0.810, -0.316) | 0.036 (0.020, 0.052) | | 0.014 (-0.030, 0.058) | 0.074 (-0.173, 0.320) |
| 5 | -0.081 (-0.412, 0.251) | | 0.091 (-0.299, 0.480) | 0.150 (-0.236, 0.536) | | -0.563 (-0.810, -0.316) | 0.036 (0.020, 0.052) | | 0.015 (-0.029, 0.058) | 0.073 (-0.174, 0.320) |
| 6 | -0.056 (-0.370, 0.258) | | | 0.109 (-0.233, 0.451) | | -0.564 (-0.811, -0.317) | 0.035 (0.019, 0.051) | | 0.010 (-0.028, 0.047) | 0.068 (-0.178, 0.314) |
| 7 | -0.057 (-0.372, 0.257) | | | 0.114 (-0.228, 0.456) | | -0.561 (-0.808, -0.314) | 0.036 (0.020, 0.052) | | | 0.070 (-0.176, 0.316) |
| 8 | -0.062 (-0.376, 0.252) | | | 0.122 (-0.218, 0.463) | | -0.562 (-0.808, -0.315) | 0.036 (0.020, 0.052) | | | |
| 9 | -0.006 (-0.249, 0.236) | | | | | -0.565 (-0.811, -0.319) | 0.037 (0.021, 0.053) | | | |

| Number and proportion with >= 1 Further emergency admission | | | | | | | | | | |
|---|-------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|---------------------------|---------------------------|--------------------------|---------------------------|-------------------------|
| Model | Factors and covariates | | | | | | | | | |
| | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age² | Distance | Out-of-hour |
| 1 | -0.025 (-0.351, 0.302) | 0.038 (-0.243, 0.319) | 0.152 (-0.199, 0.502) | 0.041 (-0.336, 0.419) | 0.174 (-0.262, 0.611) | -0.120 (-0.268, 0.028) | -0.004 (-0.035, 0.027) | 0.109 (-0.799, 1.017) | -0.015 (-0.041, 0.012) | 0.184 (0.039, 0.328) |
| 2 | 0.006 (-0.158, 0.170) | 0.060 (-0.136, 0.256) | 0.168 (-0.149, 0.485) | | 0.144 (-0.188, 0.475) | -0.120 (-0.268, 0.028) | -0.004 (-0.035, 0.027) | 0.111 (-0.798, 1.019) | -0.015 (-0.042, 0.012) | 0.184 (0.039, 0.328) |
| 3 | 0.006 (-0.158, 0.170) | 0.059 (-0.136, 0.255) | 0.168 (-0.149, 0.485) | | 0.144 (-0.188, 0.476) | -0.120 (-0.267, 0.028) | 0.000 (-0.009, 0.009) | | -0.015 (-0.042, 0.012) | 0.184 (0.040, 0.329) |
| 4 | 0.006 (-0.158, 0.169) | 0.059 (-0.137, 0.255) | 0.168 (-0.149, 0.485) | | 0.144 (-0.188, 0.476) | -0.121 (-0.266, 0.025) | | | -0.015 (-0.042, 0.012) | 0.184 (0.040, 0.328) |
| 5 | 0.003 (-0.160, 0.167) | | 0.115 (-0.149, 0.380) | | 0.146 (-0.186, 0.477) | -0.121 (-0.267, 0.025) | | | -0.017 (-0.043, 0.009) | 0.186 (0.042, 0.330) |
| 6 | 0.003 (-0.160, 0.166) | | 0.122 (-0.142, 0.386) | | 0.149 (-0.183, 0.480) | -0.121 (-0.267, 0.025) | | | -0.017 (-0.043, 0.009) | 0.186 (0.042, 0.330) |

| | | | | | | |
|----|-----------------------------|-----------------------------|-----------------------------|------------------------------|------------------------------|----------------------------|
| 7 | 0.003 (-0.160, 0.167) | 0.139 (-0.122, 0.400) | 0.144 (-0.187, 0.476) | -0.121 (-0.267, 0.025) | -0.017 (-0.043, 0.009) | 0.187 (0.043, 0.331) |
| 8 | 0.038 (-0.104, 0.181) | 0.214 (0.020, 0.408) | | -0.121 (-0.267, 0.025) | -0.017 (-0.043, 0.008) | 0.186 (0.042, 0.330) |
| 9 | 0.033 (-0.108, 0.174) | 0.278 (0.113, 0.443) | | -0.143 (-0.287, 0.001) | | 0.184 (0.042, 0.327) |
| 10 | 0.038 (-0.103, 0.179) | 0.285 (0.120, 0.449) | | | | 0.186 (0.044, 0.329) |

Number and proportion with >= 1 Further ED attendance

| Factors and covariates | | | | | | | | | | |
|------------------------|-----------------------------|-----------------------------|----------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------------|----------------------------|------------------------------|-----------------------------|
| Model | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age ² | Distance | Out-of-hour |
| 1 | 0.007 (-0.356, 0.370) | 0.242 (-0.066, 0.550) | 0.487 (0.113, 0.861) | 0.077 (-0.335, 0.489) | 0.015 (-0.452, 0.483) | 0.014 (-0.142, 0.169) | -0.034 (-0.065, -0.004) | 1.133 (0.227, 2.040) | -0.014 (-0.042, 0.015) | 0.006 (-0.146, 0.158) |
| 2 | 0.016 (-0.212, 0.245) | 0.247 (-0.020, 0.514) | 0.495 (0.215, 0.775) | 0.068 (-0.233, 0.368) | | 0.014 (-0.142, 0.169) | -0.035 (-0.065, -0.004) | 1.134 (0.228, 2.040) | -0.014 (-0.042, 0.015) | 0.006 (-0.146, 0.157) |
| 3 | 0.016 (-0.212, 0.245) | 0.247 (-0.019, 0.514) | 0.495 (0.215, 0.774) | 0.068 (-0.233, 0.368) | | 0.014 (-0.142, 0.169) | -0.035 (-0.065, -0.004) | 1.135 (0.230, 2.041) | -0.014 (-0.042, 0.015) | |
| 4 | 0.016 (-0.213, 0.244) | 0.247 (-0.019, 0.514) | 0.494 (0.215, 0.774) | 0.068 (-0.233, 0.368) | | | -0.034 (-0.065, -0.004) | 1.137 (0.231, 2.042) | -0.014 (-0.042, 0.015) | |
| 5 | 0.055 (-0.093, 0.204) | 0.283 (0.070, 0.496) | 0.495 (0.215, 0.774) | | | | -0.035 (-0.065, -0.004) | 1.138 (0.232, 2.043) | -0.014 (-0.042, 0.014) | |
| 6 | 0.054 (-0.094, 0.203) | 0.311 (0.106, 0.517) | 0.569 (0.333, 0.805) | | | | -0.035 (-0.065, -0.004) | 1.139 (0.233, 2.044) | | |
| 7 | 0.065 (-0.083, 0.212) | 0.314 (0.109, 0.518) | 0.546 (0.314, 0.778) | | | | -0.033 (-0.064, -0.002) | 1.075 (0.173, 1.977) | | |

Number and proportion with >= 1 Further 999 call

| Factors and covariates | | | | | | | | | | |
|------------------------|------------------------------|----------------------------|----------------------------|------------------------------|-----------------------------|---------------------------|----------------------------|------------------------------|------------------------------|----------------------------|
| Model | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age ² | Distance | Out-of-hour |
| 1 | -0.137 (-0.497, 0.223) | 0.476 (0.179, 0.773) | 0.278 (0.094, 0.650) | -0.133 (-0.539, 0.273) | 0.036 (-0.438, 0.510) | -0.095 (-0.247, 0.057) | 0.043 (0.008, 0.077) | -0.609 (-1.585, 0.367) | -0.013 (-0.040, 0.015) | 0.336 (0.189, 0.483) |
| 2 | -0.116 (-0.350, 0.118) | 0.487 (0.228, 0.746) | 0.297 (0.015, 0.578) | -0.154 (-0.453, 0.145) | | -0.095 (-0.247, 0.057) | 0.043 (0.008, 0.077) | -0.608 (-1.584, 0.367) | -0.013 (-0.040, 0.015) | 0.336 (0.189, 0.483) |

Table E1. Continued.

Number and proportion with >= 1 Further 999 call

| Model | Factors and covariates | | | | | | | | | |
|-------|----------------------------|-------------------------|-------------------------|---------------------------|--------------|---------------------------|-------------------------|---------------------------|----------|-------------------------|
| | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age ² | Distance | Out-hour |
| 3 | -0.118 (-0.352, 0.116) | 0.511 (0.257, 0.766) | 0.365 (0.125, 0.605) | -0.152 (-0.451, 0.148) | | -0.097 (-0.249, 0.055) | 0.043 (0.008, 0.077) | -0.608 (-1.584, 0.368) | | 0.336 (0.189, 0.484) |
| 4 | -0.211 (-0.357, -0.065) | 0.434 (0.231, 0.637) | 0.361 (0.121, 0.602) | | | -0.097 (-0.249, 0.055) | 0.043 (0.008, 0.077) | -0.611 (-1.587, 0.364) | | 0.336 (0.189, 0.483) |
| 5 | -0.210 (-0.356, -0.064) | 0.439 (0.236, 0.641) | 0.363 (0.122, 0.603) | | | -0.099 (-0.251, 0.053) | 0.022 (0.013, 0.032) | | | 0.333 (0.186, 0.480) |
| 6 | -0.204 (-0.350, -0.059) | 0.447 (0.244, 0.649) | 0.371 (0.132, 0.610) | | | | 0.021 (0.012, 0.030) | | | 0.340 (0.193, 0.487) |

Further ED attendances per patient per day at risk: raw

| Model | Factors and covariates | | | | | | | | | |
|-------|--------------------------|--------------------------|-------------------------|---------------------------|---------------------------|---------------------------|--------------------------|---------------------------|--------------------------|---------------------------|
| | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age ² | Distance | Out-hour |
| 1 | 0.005 (-0.008, 0.017) | 0.007 (-0.003, 0.018) | 0.022 (0.008, 0.036) | -0.003 (-0.017, 0.012) | -0.007 (-0.025, 0.010) | -0.001 (-0.007, 0.005) | 0.000 (-0.001, 0.001) | -0.001 (-0.036, 0.034) | 0.000 (-0.001, 0.001) | -0.001 (-0.006, 0.005) |
| 2 | 0.004 (-0.008, 0.017) | 0.007 (-0.003, 0.018) | 0.022 (0.008, 0.036) | -0.003 (-0.017, 0.012) | -0.007 (-0.025, 0.010) | -0.001 (-0.007, 0.005) | 0.000 (-0.001, 0.001) | -0.001 (-0.036, 0.034) | 0.000 (-0.001, 0.001) | -0.001 (-0.006, 0.005) |
| 3 | 0.004 (-0.008, 0.017) | 0.007 (-0.003, 0.018) | 0.022 (0.008, 0.036) | -0.003 (-0.017, 0.012) | -0.007 (-0.025, 0.010) | -0.001 (-0.007, 0.005) | 0.000 (0.000, 0.001) | | 0.000 (-0.001, 0.001) | -0.001 (-0.006, 0.005) |
| 4 | 0.004 (-0.008, 0.017) | 0.007 (-0.003, 0.018) | 0.022 (0.008, 0.035) | -0.003 (-0.017, 0.012) | -0.007 (-0.024, 0.010) | -0.001 (-0.007, 0.005) | 0.000 (0.000, 0.001) | | 0.000 (-0.001, 0.001) | |
| 5 | 0.005 (-0.008, 0.017) | 0.007 (-0.003, 0.018) | 0.022 (0.008, 0.035) | -0.003 (-0.017, 0.012) | -0.007 (-0.024, 0.012) | | 0.000 (0.000, 0.001) | | 0.000 (-0.001, 0.001) | |
| 6 | 0.002 (-0.004, 0.009) | 0.006 (-0.002, 0.013) | 0.021 (0.008, 0.033) | | -0.005 (-0.018, 0.008) | | 0.000 (0.000, 0.001) | | 0.000 (-0.001, 0.001) | |
| 7 | 0.001 (-0.004, 0.007) | 0.006 (-0.002, 0.013) | 0.018 (0.008, 0.028) | | | | 0.000 (0.000, 0.001) | | 0.000 (-0.001, 0.001) | |
| 8 | 0.002 (-0.004, 0.007) | 0.006 (-0.001, 0.013) | 0.020 (0.011, 0.029) | | | | 0.000 (0.000, 0.001) | | | |
| 9 | 0.001 (-0.004, 0.007) | 0.005 (-0.002, 0.012) | 0.019 (0.010, 0.027) | | | | | | | |

| | | | |
|----|-----------------------------|-----------------------------|----------------------------|
| 10 | 0.001 (-0.004, 0.007) | 0.005 (-0.002, 0.013) | 0.019 (0.011, 0.028) |
| 11 | 0.001 (-0.005, 0.007) | | 0.015 (0.009, 0.022) |

Further ED attendances per patient per day at risk: transformed

| Model | Factors and covariates | | | | | | | | | |
|-------|-----------------------------|-----------------------------|----------------------------|------------------------------|------------------------------|------------------------------|------------------------------|-----------------------------|------------------------------|-----------------------------|
| | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age ² | Distance | Out-c hour |
| 1 | 0.070 (-0.168, 0.309) | 0.169 (-0.035, 0.373) | 0.443 (0.182, 0.705) | -0.016 (-0.290, 0.259) | -0.124 (-0.451, 0.204) | -0.025 (-0.135, 0.084) | -0.016 (-0.038, 0.007) | 0.656 (-0.016, 1.328) | -0.009 (-0.028, 0.011) | 0.022 (-0.085, 0.129) |
| 2 | 0.058 (-0.060, 0.177) | 0.161 (0.018, 0.303) | 0.437 (0.200, 0.674) | | -0.112 (-0.366, 0.142) | -0.025 (-0.135, 0.084) | -0.016 (-0.038, 0.007) | 0.656 (-0.016, 1.328) | -0.009 (-0.028, 0.011) | 0.022 (-0.085, 0.129) |
| 3 | 0.058 (-0.060, 0.177) | 0.162 (0.019, 0.304) | 0.430 (0.193, 0.666) | | -0.107 (-0.360, 0.147) | -0.025 (-0.134, 0.085) | -0.016 (-0.039, 0.007) | 0.666 (-0.005, 1.338) | -0.009 (-0.028, 0.011) | |
| 4 | 0.059 (-0.059, 0.178) | 0.162 (0.020, 0.304) | 0.430 (0.194, 0.666) | | -0.106 (-0.360, 0.147) | | -0.016 (-0.039, 0.007) | 0.664 (-0.007, 1.336) | -0.009 (-0.028, 0.011) | |
| 5 | 0.059 (-0.060, 0.177) | 0.165 (0.023, 0.307) | 0.420 (0.185, 0.655) | | -0.103 (-0.357, 0.150) | | -0.016 (-0.039, 0.006) | 0.669 (-0.002, 1.340) | -0.009 (-0.028, 0.010) | |
| 6 | 0.036 (-0.069, 0.141) | 0.164 (0.022, 0.306) | 0.366 (0.172, 0.561) | | | | -0.016 (-0.039, 0.007) | 0.666 (-0.005, 1.337) | -0.009 (-0.028, 0.011) | |
| 7 | 0.043 (-0.062, 0.147) | 0.178 (0.041, 0.315) | 0.412 (0.249, 0.574) | | | | -0.015 (-0.037, 0.008) | 0.602 (-0.067, 1.270) | | |
| 8 | 0.041 (-0.063, 0.146) | 0.175 (0.038, 0.311) | 0.412 (0.249, 0.574) | | | | | 0.189 (-0.003, 0.381) | | |
| 9 | 0.044 (-0.061, 0.148) | 0.172 (0.036, 0.308) | 0.401 (0.239, 0.563) | | | | | | | |

Further 999 calls per patient per day at risk: raw

| Model | Factors and covariates | | | | | | | | | |
|-------|--------------------------|-----------------------------|----------------------------|------------------------------|------------------------------|------------------------------|----------------------------|------------------------------|------------------------------|----------------------------|
| | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age ² | Distance | Out-c hour |
| 1 | 0.003 (-0.007, 0.013) | 0.008 (-0.001, 0.016) | 0.011 (0.001, 0.022) | -0.009 (-0.020, 0.003) | -0.010 (-0.024, 0.003) | -0.001 (-0.005, 0.004) | 0.001 (0.000, 0.002) | -0.013 (-0.041, 0.014) | -0.001 (-0.001, 0.000) | 0.005 (0.001, 0.010) |
| 2 | 0.003 (-0.007, 0.013) | 0.008 (-0.001, 0.016) | 0.011 (0.001, 0.022) | -0.009 (-0.020, 0.003) | -0.010 (-0.024, 0.003) | | 0.001 (0.000, 0.002) | -0.013 (-0.041, 0.014) | -0.001 (-0.001, 0.000) | 0.005 (0.001, 0.010) |

Table E1. Continued.**Further 999 calls per patient per day at risk: raw**

| Model | Factors and covariates | | | | | | | | | |
|-------|---------------------------|--------------------------|--------------------------|---------------------------|---------------------------|--------|-------------------------|------------------|---------------------------|-------------------------|
| | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age ² | Distance | Out-of-hours |
| 3 | 0.003 (-0.006, 0.013) | 0.008 (-0.001, 0.016) | 0.011 (0.001, 0.022) | -0.009 (-0.020, 0.003) | -0.010 (-0.024, 0.003) | | 0.001 (0.000, 0.001) | | -0.001 (-0.001, 0.000) | 0.005 (0.001, 0.010) |
| 4 | 0.003 (-0.006, 0.013) | 0.008 (-0.001, 0.016) | 0.012 (0.001, 0.023) | -0.009 (-0.020, 0.003) | -0.010 (-0.024, 0.003) | | 0.001 (0.000, 0.001) | | -0.001 (-0.001, 0.000) | 0.005 (0.001, 0.010) |
| 5 | -0.002 (-0.009, 0.005) | 0.005 (-0.003, 0.012) | 0.006 (-0.002, 0.014) | -0.003 (-0.012, 0.006) | | | 0.001 (0.000, 0.001) | | -0.001 (-0.001, 0.000) | 0.005 (0.001, 0.010) |
| 6 | -0.004 (-0.008, 0.000) | 0.003 (-0.003, 0.009) | 0.006 (-0.002, 0.014) | | | | 0.001 (0.000, 0.001) | | -0.001 (-0.001, 0.000) | 0.005 (0.001, 0.010) |
| 7 | -0.004 (-0.008, 0.000) | | 0.004 (-0.003, 0.010) | | | | 0.001 (0.000, 0.001) | | -0.001 (-0.002, 0.000) | 0.005 (0.001, 0.010) |
| 8 | -0.004 (-0.008, 0.000) | | | | | | 0.001 (0.000, 0.001) | | -0.001 (-0.002, 0.000) | 0.005 (0.001, 0.009) |

Further 999 calls per patient per day at risk: transformed

| Model | Factors and covariates | | | | | | | | | |
|-------|----------------------------|-------------------------|--------------------------|---------------------------|---------------------------|---------------------------|-------------------------|---------------------------|---------------------------|-------------------------|
| | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age ² | Distance | Out-of-hours |
| 1 | -0.019 (-0.261, 0.224) | 0.305 (0.098, 0.513) | 0.208 (-0.058, 0.474) | -0.179 (-0.458, 0.101) | -0.080 (-0.413, 0.254) | -0.074 (-0.186, 0.037) | 0.030 (0.007, 0.053) | -0.347 (-1.032, 0.338) | -0.010 (-0.030, 0.009) | 0.243 (0.134, 0.352) |
| 2 | -0.061 (-0.227, 0.105) | 0.283 (0.098, 0.467) | 0.166 (-0.034, 0.365) | -0.136 (-0.353, 0.080) | | -0.074 (-0.186, 0.037) | 0.030 (0.007, 0.053) | -0.350 (-1.034, 0.335) | -0.010 (-0.030, 0.010) | 0.243 (0.134, 0.352) |
| 3 | -0.060 (-0.226, 0.106) | 0.285 (0.100, 0.469) | 0.166 (-0.033, 0.366) | -0.136 (-0.353, 0.080) | | -0.075 (-0.187, 0.037) | 0.019 (0.012, 0.025) | | -0.010 (-0.030, 0.010) | 0.241 (0.132, 0.350) |
| 4 | -0.056 (-0.221, 0.108) | 0.311 (0.131, 0.491) | 0.221 (0.054, 0.388) | -0.141 (-0.356, 0.075) | | -0.082 (-0.193, 0.029) | 0.018 (0.012, 0.025) | | | 0.245 (0.136, 0.353) |
| 5 | -0.138 (-0.245, -0.032) | 0.237 (0.097, 0.376) | 0.219 (0.052, 0.386) | | | -0.082 (-0.194, 0.029) | 0.018 (0.012, 0.025) | | | 0.245 (0.136, 0.353) |
| 6 | -0.135 (-0.242, -0.029) | 0.239 (0.100, 0.378) | 0.224 (0.057, 0.391) | | | | 0.018 (0.011, 0.024) | | | 0.246 (0.138, 0.355) |

At 6 months

Composite: Number and proportion of patients who died or with further emergency admission, ED attendance or 999 call

| Factors and covariates | | | | | | | | | | |
|------------------------|-----------------------------|-----------------------------|-----------------------------|------------------------------|------------------------------|-------------------------------|-----------------------------|-----------------------------|------------------------------|----------------------------|
| Model | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age ² | Distance | Out- hours |
| 1 | 0.066 (-0.211, 0.342) | 0.150 (-0.090, 0.390) | 0.180 (-0.132, 0.492) | -0.074 (-0.399, 0.250) | -0.001 (-0.395, 0.393) | -0.337 (-0.474, -0.200) | 0.017 (-0.011, 0.044) | 0.363 (-0.473, 1.199) | -0.009 (-0.032, 0.014) | 0.330 (0.197, 0.463) |
| 2 | 0.065 (-0.132, 0.262) | 0.150 (-0.067, 0.366) | 0.179 (-0.057, 0.415) | -0.074 (-0.334, 0.186) | | -0.337 (-0.474, -0.200) | 0.017 (-0.011, 0.044) | 0.363 (-0.473, 1.199) | -0.009 (-0.032, 0.014) | 0.330 (0.197, 0.463) |
| 3 | 0.023 (-0.106, 0.151) | 0.111 (-0.058, 0.280) | 0.179 (-0.057, 0.415) | | | -0.337 (-0.474, -0.200) | 0.017 (-0.011, 0.044) | 0.361 (-0.474, 1.197) | -0.009 (-0.032, 0.014) | 0.330 (0.196, 0.463) |
| 4 | 0.022 (-0.107, 0.151) | 0.129 (-0.033, 0.291) | 0.227 (0.028, 0.426) | | | -0.338 (-0.475, -0.201) | 0.017 (-0.011, 0.044) | 0.361 (-0.475, 1.196) | | 0.329 (0.196, 0.462) |
| 5 | 0.021 (-0.108, 0.150) | 0.127 (-0.035, 0.289) | 0.226 (0.027, 0.425) | | | -0.338 (-0.475, -0.201) | 0.028 (0.020, 0.036) | | | 0.331 (0.198, 0.464) |
| 6 | 0.016 (-0.113, 0.144) | | 0.135 (-0.027, 0.298) | | | -0.340 (-0.477, -0.203) | 0.028 (0.020, 0.036) | | | 0.336 (0.203, 0.469) |
| 7 | 0.018 (-0.111, 0.146) | | | | | -0.343 (-0.480, -0.207) | 0.028 (0.020, 0.036) | | | 0.322 (0.190, 0.454) |

Number and proportion died

| Factors and covariates | | | | | | | | | | |
|------------------------|-----------------------------|-----------------------------|-------------------------------|-------------------------------|------------------------------|-------------------------------|----------------------------|-----------------------------|-------------------------------|----------------------------|
| Model | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age ² | Distance | Out- hours |
| 1 | 0.281 (-0.054, 0.615) | 0.124 (-0.173, 0.421) | -0.273 (-0.664, 0.117) | -0.404 (-0.792, -0.016) | -0.143 (-0.623, 0.336) | -0.583 (-0.738, -0.428) | 0.046 (0.009, 0.083) | 0.184 (-0.824, 1.192) | -0.027 (-0.055, 0.001) | 0.247 (0.095, 0.400) |
| 2 | 0.279 (-0.055, 0.614) | 0.122 (-0.174, 0.419) | -0.274 (-0.665, 0.116) | -0.403 (-0.790, -0.015) | -0.142 (-0.622, 0.337) | -0.582 (-0.738, -0.427) | 0.053 (0.042, 0.063) | | -0.027 (-0.055, 0.001) | 0.248 (0.096, 0.400) |
| 3 | 0.210 (-0.029, 0.449) | 0.082 (-0.179, 0.343) | -0.355 (-0.636, -0.073) | -0.333 (-0.642, -0.024) | | -0.582 (-0.737, -0.427) | 0.053 (0.042, 0.063) | | -0.027 (-0.055, 0.001) | 0.248 (0.096, 0.400) |
| 4 | 0.170 (-0.031, 0.371) | | -0.396 (-0.644, -0.149) | -0.271 (-0.509, -0.035) | | -0.583 (-0.738, -0.428) | 0.053 (0.043, 0.063) | | -0.029 (-0.056, -0.001) | 0.250 (0.098, 0.402) |
| 5 | 0.171 (-0.030, 0.372) | | -0.383 (-0.627, -0.138) | -0.274 (-0.510, -0.038) | | -0.583 (-0.738, -0.428) | 0.053 (0.042, 0.063) | | -0.028 (-0.056, -0.001) | 0.250 (0.098, 0.402) |

Table E1. Continued.

| Number and proportion died | | | | | | | | | | |
|---|------------------------------|-------------------------------|-------------------------------|-------------------------------|-----------------------------|-------------------------------|-----------------------------|------------------------------|-------------------------------|-----------------------------|
| Factors and covariates | | | | | | | | | | |
| Model | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age² | Distance | Out-of-hours |
| 6 | 0.171 (-0.029, 0.372) | | -0.392 (-0.616, -0.128) | -0.273 (-0.509, -0.038) | | -0.583 (-0.738, -0.428) | 0.053 (0.042, 0.063) | | -0.029 (-0.057, -0.002) | 0.249 (0.097, 0.401) |
| Number and proportion with >= 1 Further emergency admission | | | | | | | | | | |
| Factors and covariates | | | | | | | | | | |
| Model | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age² | Distance | Out-of-hours |
| 1 | 0.013 (-0.245, 0.270) | -0.095 (-0.318, 0.128) | 0.018 (-0.268, 0.303) | -0.056 (-0.355, 0.244) | 0.097 (-0.261, 0.455) | -0.187 (-0.309, -0.065) | 0.010 (-0.015, 0.036) | -0.039 (-0.786, 0.708) | -0.031 (-0.053, -0.010) | 0.116 (-0.003, 0.235) |
| 2 | 0.013 (-0.244, 0.270) | -0.095 (-0.318, 0.129) | 0.018 (-0.268, 0.303) | -0.056 (-0.355, 0.244) | 0.096 (-0.262, 0.454) | -0.187 (-0.309, -0.065) | 0.009 (0.001, 0.016) | | -0.031 (-0.053, -0.010) | 0.116 (-0.003, 0.235) |
| 3 | 0.005 (-0.220, 0.230) | -0.103 (-0.276, 0.069) | | -0.048 (-0.321, 0.224) | 0.111 (-0.158, 0.380) | -0.187 (-0.309, -0.066) | 0.009 (0.001, 0.016) | | -0.032 (-0.052, -0.012) | 0.116 (-0.003, 0.234) |
| 4 | 0.004 (-0.221, 0.229) | -0.104 (-0.277, 0.068) | | -0.047 (-0.319, 0.226) | 0.114 (-0.155, 0.383) | -0.187 (-0.309, -0.066) | 0.009 (0.001, 0.016) | | -0.032 (-0.052, -0.012) | 0.115 (-0.003, 0.234) |
| 5 | -0.028 (-0.155, 0.099) | -0.123 (-0.255, 0.008) | | | 0.137 (-0.095, 0.369) | -0.187 (-0.309, -0.065) | 0.009 (0.001, 0.016) | | -0.031 (-0.050, -0.012) | 0.116 (-0.003, 0.234) |
| 6 | 0.002 (-0.115, 0.118) | -0.155 (-0.276, -0.035) | | | | -0.188 (-0.310, -0.066) | 0.009 (0.001, 0.016) | | -0.035 (-0.053, -0.017) | 0.113 (-0.005, 0.232) |
| 7 | 0.001 (-0.115, 0.118) | -0.143 (-0.263, -0.024) | | | | -0.187 (-0.309, -0.065) | 0.009 (0.002, 0.016) | | -0.035 (-0.053, -0.017) | |
| Number and proportion with >= 1 Further ED attendance | | | | | | | | | | |
| Factors and covariates | | | | | | | | | | |
| Model | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age² | Distance | Out-of-hours |
| 1 | -0.126 (-0.391, 0.139) | 0.119 (-0.108, 0.347) | 0.455 (0.166, 0.744) | 0.179 (-0.128, 0.486) | 0.082 (-0.283, 0.446) | -0.072 (-0.195, 0.051) | 0.006 (-0.019, 0.032) | 0.226 (-0.528, 0.980) | -0.033 (-0.054, -0.011) | 0.140 (0.020, 0.260) |
| 2 | -0.083 (-0.264, 0.099) | 0.143 (-0.059, 0.345) | 0.498 (0.280, 0.715) | 0.136 (-0.102, 0.374) | | -0.072 (-0.195, 0.051) | 0.006 (-0.020, 0.032) | 0.230 (-0.524, 0.984) | -0.033 (-0.055, -0.011) | 0.139 (0.020, 0.259) |

| | | | | | | | | |
|---|------------------------------|-----------------------------|----------------------------|-----------------------------|------------------------------|----------------------------|-------------------------------|----------------------------|
| 3 | -0.082 (-0.263, 0.100) | 0.145 (-0.058, 0.347) | 0.498 (0.280, 0.715) | 0.135 (-0.103, 0.373) | -0.071 (-0.194, 0.052) | 0.405 (0.187, 0.622) | -0.033 (-0.055, -0.011) | 0.139 (0.019, 0.259) |
| 4 | 0.003 (-0.121, 0.115) | 0.216 (0.057, 0.375) | 0.499 (0.281, 0.716) | | -0.071 (-0.194, 0.052) | 0.404 (0.186, 0.622) | -0.033 (-0.055, -0.011) | 0.139 (0.019, 0.259) |
| 5 | 0.000 (-0.118, 0.117) | 0.217 (0.058, 0.375) | 0.501 (0.283, 0.718) | | | 0.386 (0.170, 0.601) | -0.033 (-0.055, -0.012) | 0.141 (0.021, 0.260) |
| 6 | -0.001 (-0.118, 0.116) | 0.212 (0.053, 0.371) | 0.518 (0.302, 0.734) | | | 0.385 (0.169, 0.600) | -0.033 (-0.055, -0.012) | 0.142 (0.022, 0.262) |

Number and proportion with >= 1 Further 999 call

| Factors and covariates | | | | | | | | | | |
|------------------------|------------------------------|----------------------------|----------------------------|------------------------------|-------------------------------|------------------------------|----------------------------|-----------------------------|------------------------------|----------------------------|
| Model | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age ² | Distance | Out-of-hours |
| 1 | 0.144 (-0.120, 0.409) | 0.293 (0.063, 0.523) | 0.341 (0.049, 0.633) | -0.261 (-0.567, 0.046) | -0.439 (-0.805, -0.073) | -0.048 (-0.171, 0.076) | 0.028 (0.002, 0.055) | 0.040 (-0.733, 0.812) | -0.018 (-0.040, 0.004) | 0.444 (0.324, 0.565) |
| 2 | 0.144 (-0.120, 0.409) | 0.292 (0.063, 0.522) | 0.341 (0.049, 0.633) | -0.260 (-0.567, 0.047) | -0.439 (-0.805, -0.073) | -0.048 (-0.171, 0.076) | 0.029 (0.022, 0.037) | | -0.018 (-0.040, 0.004) | 0.445 (0.324, 0.565) |
| 3 | 0.144 (-0.121, 0.409) | 0.293 (0.063, 0.522) | 0.344 (0.052, 0.635) | -0.260 (-0.567, 0.047) | -0.438 (-0.803, -0.072) | -0.047 (-0.171, 0.076) | 0.029 (0.022, 0.037) | | -0.018 (-0.040, 0.004) | 0.444 (0.324, 0.565) |
| 4 | 0.146 (-0.119, 0.411) | 0.294 (0.064, 0.523) | 0.345 (0.054, 0.637) | -0.260 (-0.567, 0.047) | -0.438 (-0.803, -0.072) | | 0.029 (0.022, 0.036) | | -0.018 (-0.040, 0.004) | 0.445 (0.325, 0.565) |
| 5 | 0.134 (-0.130, 0.398) | 0.324 (0.097, 0.550) | 0.435 (0.165, 0.706) | -0.248 (-0.554, 0.058) | -0.423 (-0.788, -0.058) | | 0.029 (0.021, 0.036) | | | 0.445 (0.325, 0.565) |
| 6 | -0.050 (-0.184, 0.084) | 0.188 (0.036, 0.341) | 0.331 (0.094, 0.568) | | -0.238 (-0.524, 0.047) | | 0.029 (0.022, 0.036) | | | 0.445 (0.325, 0.565) |
| 7 | -0.107 (-0.225, 0.011) | 0.187 (0.034, 0.339) | 0.196 (0.014, 0.378) | | | | 0.029 (0.022, 0.037) | | | 0.445 (0.325, 0.565) |

Further ED attendances per patient per day at risk: raw

| Factors and covariates | | | | | | | | | | |
|------------------------|------------------------------|------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|----------------------------|------------------------------|-----------------------------|------------------------------|
| Model | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age ² | Distance | Out-of-hours |
| 1 | -0.001 (-0.011, 0.010) | -0.004 (-0.013, 0.005) | 0.003 (-0.008, 0.014) | 0.004 (-0.008, 0.016) | 0.000 (-0.014, 0.014) | 0.000 (-0.005, 0.005) | 0.001 (0.000, 0.002) | -0.018 (-0.047, 0.012) | 0.000 (-0.001, 0.001) | -0.002 (-0.006, 0.003) |
| 2 | 0.001 (-0.007, 0.007) | -0.004 (-0.011, 0.004) | 0.003 (-0.005, 0.012) | 0.004 (-0.005, 0.013) | | 0.000 (-0.005, 0.005) | 0.001 (0.000, 0.002) | -0.018 (-0.047, 0.012) | 0.000 (-0.001, 0.001) | -0.002 (-0.006, 0.003) |

Table E1. Continued.**Further ED attendances per patient per day at risk: raw**

| Model | Factors and covariates | | | | | | | | | |
|-------|--------------------------|---------------------------|--------------------------|--------------------------|--------------|--------|-------------------------|---------------------------|--------------------------|---------------------------|
| | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age ² | Distance | Out-of-hours |
| 3 | 0.000 (-0.007, 0.007) | -0.004 (-0.011, 0.004) | 0.003 (-0.005, 0.012) | 0.004 (-0.005, 0.013) | | | 0.001 (0.000, 0.002) | -0.018 (-0.047, 0.012) | 0.000 (-0.001, 0.001) | -0.002 (-0.006, 0.003) |
| 4 | 0.001 (-0.006, 0.008) | -0.002 (-0.010, 0.005) | 0.006 (-0.001, 0.013) | 0.003 (-0.007, 0.012) | | | 0.001 (0.000, 0.002) | -0.016 (-0.046, 0.014) | | -0.001 (-0.006, 0.004) |
| 5 | 0.001 (-0.006, 0.008) | -0.002 (-0.010, 0.005) | 0.006 (-0.001, 0.013) | 0.003 (-0.007, 0.012) | | | 0.001 (0.000, 0.002) | -0.016 (-0.046, 0.013) | | |
| 6 | 0.002 (-0.002, 0.007) | -0.001 (-0.007, 0.005) | 0.006 (-0.001, 0.013) | | | | 0.001 (0.000, 0.002) | -0.016 (-0.046, 0.014) | | |
| 7 | 0.003 (-0.002, 0.007) | | 0.007 (0.001, 0.012) | | | | 0.001 (0.000, 0.002) | -0.016 (-0.046, 0.014) | | |
| 8 | 0.003 (-0.002, 0.007) | | 0.007 (0.001, 0.012) | | | | 0.000 (0.000, 0.000) | | | |
| 9 | 0.002 (-0.002, 0.007) | | 0.006 (0.000, 0.012) | | | | | | | |

Further ED attendances per patient per day at risk: transformed

| Model | Factors and covariates | | | | | | | | | |
|-------|---------------------------|--------------------------|-------------------------|--------------------------|--------------------------|---------------------------|--------------------------|--------------------------|----------------------------|-------------------------|
| | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age ² | Distance | Out-of-hours |
| 1 | -0.084 (-0.274, 0.107) | 0.073 (-0.092, 0.239) | 0.398 (0.186, 0.610) | 0.102 (-0.120, 0.324) | 0.030 (-0.236, 0.295) | -0.078 (-0.169, 0.012) | 0.006 (-0.013, 0.025) | 0.186 (-0.365, 0.736) | -0.027 (-0.043, -0.011) | 0.098 (0.010, 0.186) |
| 2 | -0.068 (-0.201, 0.064) | 0.082 (-0.066, 0.255) | 0.414 (0.255, 0.573) | 0.086 (-0.088, 0.260) | | -0.079 (-0.169, 0.012) | 0.006 (-0.013, 0.025) | 0.187 (-0.364, 0.737) | -0.027 (-0.043, -0.011) | 0.098 (0.010, 0.186) |
| 3 | -0.069 (-0.201, 0.064) | 0.080 (-0.067, 0.228) | 0.414 (0.254, 0.573) | 0.087 (-0.088, 0.261) | | -0.078 (-0.168, 0.012) | 0.012 (0.007, 0.018) | | -0.027 (-0.043, -0.011) | 0.099 (0.011, 0.187) |
| 4 | -0.019 (-0.105, 0.080) | 0.126 (0.011, 0.241) | 0.415 (0.255, 0.574) | | | -0.078 (-0.168, 0.012) | 0.012 (0.007, 0.018) | | -0.027 (-0.043, -0.012) | 0.099 (0.011, 0.187) |
| 5 | -0.015 (-0.102, 0.071) | 0.128 (0.012, 0.243) | 0.417 (0.258, 0.576) | | | | 0.012 (0.006, 0.017) | | -0.028 (-0.044, -0.012) | 0.101 (0.013, 0.189) |
| 6 | -0.016 (-0.102, 0.070) | 0.123 (0.008, 0.238) | 0.433 (0.275, 0.592) | | | | 0.012 (0.006, 0.017) | | -0.028 (-0.044, -0.012) | 0.102 (0.014, 0.190) |

Further 999 calls per patient per day at risk: raw

| Model | Factors and covariates | | | | | | | | | |
|-------|----------------------------|--------------------------|--------------------------|---------------------------|---------------------------|--------------------------|-------------------------|--------------------------|--------------------------|-------------------------|
| | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age ² | Distance | Out-ohours |
| 1 | 0.000 (-0.006, 0.006) | 0.004 (-0.001, 0.010) | 0.004 (-0.003, 0.011) | -0.006 (-0.013, 0.001) | -0.004 (-0.013, 0.005) | 0.000 (-0.003, 0.003) | 0.000 (0.000, 0.001) | 0.000 (-0.018, 0.018) | 0.000 (-0.001, 0.000) | 0.006 (0.003, 0.009) |
| 2 | 0.000 (-0.006, 0.006) | 0.004 (-0.001, 0.010) | 0.004 (-0.003, 0.011) | -0.006 (-0.013, 0.001) | -0.004 (-0.013, 0.005) | 0.000 (-0.003, 0.003) | 0.000 (0.000, 0.000) | 0.000 (0.000, 0.000) | 0.000 (-0.001, 0.000) | 0.006 (0.003, 0.009) |
| 3 | 0.000 (-0.006, 0.006) | 0.004 (-0.001, 0.010) | 0.004 (-0.003, 0.011) | -0.006 (-0.013, 0.001) | -0.004 (-0.013, 0.005) | | 0.000 (0.000, 0.000) | | 0.000 (-0.001, 0.000) | 0.006 (0.003, 0.009) |
| 4 | 0.000 (-0.006, 0.006) | 0.005 (-0.001, 0.010) | 0.006 (-0.001, 0.012) | -0.006 (-0.013, 0.001) | -0.004 (-0.012, 0.005) | | 0.000 (0.000, 0.000) | | 0.000 (0.000, 0.000) | 0.006 (0.003, 0.009) |
| 5 | -0.002 (-0.006, 0.002) | 0.004 (-0.001, 0.008) | 0.004 (-0.001, 0.008) | -0.004 (-0.010, 0.002) | | | 0.000 (0.000, 0.000) | | | 0.006 (0.003, 0.009) |
| 6 | -0.004 (-0.007, -0.002) | 0.002 (-0.002, 0.005) | 0.003 (-0.001, 0.008) | | | | 0.000 (0.000, 0.000) | | | 0.006 (0.003, 0.009) |
| 7 | -0.004 (-0.007, -0.002) | | 0.002 (-0.001, 0.006) | | | | 0.000 (0.000, 0.000) | | | 0.006 (0.003, 0.009) |
| 8 | -0.004 (-0.007, -0.002) | | | | | | 0.000 (0.000, 0.000) | | | 0.006 (0.003, 0.008) |

Further 999 calls per patient per day at risk: transformed

Further 999 calls per patient per day at risk: transformed

| Model | Factors and covariates | | | | | | | | | |
|-------|--------------------------|-------------------------|-------------------------|----------------------------|----------------------------|---------------------------|-------------------------|--------------------------|----------------------------|-------------------------|
| | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age ² | Distance | Out-ohours |
| 1 | 0.104 (-0.095, 0.303) | 0.246 (0.074, 0.419) | 0.246 (0.025, 0.467) | -0.259 (-0.491, -0.028) | -0.329 (-0.606, -0.053) | -0.081 (-0.175, 0.013) | 0.021 (0.001, 0.041) | 0.042 (-0.532, 0.616) | -0.019 (-0.036, -0.003) | 0.361 (0.269, 0.452) |
| 2 | 0.103 (-0.095, 0.302) | 0.246 (0.073, 0.418) | 0.246 (0.025, 0.467) | -0.259 (-0.490, -0.028) | -0.329 (-0.606, -0.052) | -0.081 (-0.175, 0.013) | 0.022 (0.017, 0.028) | | -0.019 (-0.036, -0.003) | 0.361 (0.269, 0.453) |
| 3 | 0.106 (-0.093, 0.305) | 0.247 (0.075, 0.420) | 0.248 (0.027, 0.469) | -0.258 (-0.490, -0.027) | -0.328 (-0.605, -0.051) | | 0.022 (0.016, 0.027) | | -0.020 (-0.036, -0.003) | 0.362 (0.271, 0.454) |
| 4 | 0.106 (-0.093, 0.305) | 0.248 (0.076, 0.420) | 0.254 (0.033, 0.424) | -0.258 (-0.490, -0.027) | -0.326 (-0.603, -0.049) | | 0.022 (0.016, 0.027) | | -0.020 (-0.036, -0.003) | 0.362 (0.271, 0.454) |

Table E1. Continued.**Further 999 calls per patient per day at risk: transformed**

| Model | Factors and covariates | | | | | | | | | |
|-------|-------------------------------|-----------------------------|-------|------------------------------|------------------------------|--------|----------------------------|------------------|-------------------------------|----------------------------|
| | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age ² | Distance | Out-o hours |
| 5 ~ | -0.005 (-0.179, 0.170) | 0.122 (-0.011, 0.255) | | -0.148 (-0.358, 0.063) | -0.116 (-0.323, 0.092) | | 0.022 (0.016, 0.027) | | -0.027 (-0.042, -0.012) | 0.358 (0.267, 0.450) |
| 6 | -0.064 (-0.202, 0.074) | 0.118 (-0.015, 0.251) | | -0.089 (-0.270, 0.093) | | | 0.022 (0.016, 0.027) | | -0.023 (-0.037, -0.009) | 0.360 (0.269, 0.452) |
| 7 | -0.115 (-0.205, -0.025) | 0.072 (-0.022, 0.165) | | | | | 0.022 (0.016, 0.027) | | -0.023 (-0.037, -0.009) | 0.360 (0.269, 0.452) |
| 8 | -0.118 (-0.208, -0.029) | | | | | | 0.022 (0.016, 0.028) | | -0.023 (-0.036, -0.008) | 0.368 (0.277, 0.459) |

Table E2. Secondary outcomes at index event, 1, and 6 months analyzed by treatment allocated.

| At index event | | | | | | | | | | |
|--|-------------------------------|----------------------------|----------------------------|--------------------------|--------------------------|---------------------------|--------------------------|---------------------------|---------------------------|----------------------------|
| Number and proportion conveyed to ED^d | | | | | | | | | | |
| Model | Factors and covariates | | | | | | | | | |
| | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age² | Distance | Out-of-hours |
| 1 | -0.069 (-0.386, 0.247) | -1.154 (-1.420, -0.889) | -0.713 (-1.042, -0.383) | 0.190 (-0.162, 0.543) | 0.084 (-0.329, 0.497) | -0.021 (-0.150, 0.108) | 0.000 (-0.027, 0.108) | -0.144 (-0.926, 0.638) | -0.006 (-0.028, 0.017) | -0.434 (-0.559, -0.310) |
| 2 | -0.069 (-0.386, 0.247) | -1.154 (-1.419, -0.889) | -0.713 (-1.042, -0.383) | 0.190 (-0.162, 0.542) | 0.084 (-0.329, 0.497) | -0.021 (-0.150, 0.108) | | -0.144 (-0.371, 0.083) | -0.006 (-0.028, 0.017) | -0.434 (-0.559, -0.310) |
| 3 | -0.069 (-0.385, 0.248) | -1.154 (-1.419, -0.888) | -0.712 (-1.041, -0.383) | 0.190 (-0.162, 0.542) | 0.084 (-0.329, 0.497) | | | -0.149 (-0.374, 0.075) | -0.006 (-0.029, 0.017) | -0.434 (-0.558, -0.310) |
| 4 | -0.019 (-0.222, 0.184) | -1.126 (-1.353, -0.899) | -0.667 (-0.910, -0.424) | 0.141 (-0.114, 0.396) | | | | -0.149 (-0.374, 0.075) | -0.006 (-0.029, 0.017) | -0.434 (-0.558, -0.310) |
| 5 | -0.020 (-0.223, 0.183) | -1.115 (-1.337, -0.892) | -0.635 (-0.843, -0.427) | 0.142 (-0.113, 0.397) | | | | -0.150 (-0.374, 0.075) | | -0.434 (-0.558, -0.310) |
| 6 | 0.069 (-0.053, 0.192) | -1.039 (-1.214, -0.864) | -0.632 (-0.840, -0.424) | | | | | -0.149 (-0.374, 0.075) | | -0.433 (-0.558, -0.309) |
| 7 | 0.068 (-0.055, 0.190) | -1.040 (-1.215, -0.865) | -0.626 (-0.834, -0.418) | | | | | | | -0.438 (-0.562, -0.314) |
| 8 | 0.079 (-0.043, 0.201) | -1.001 (-1.173, -0.828) | -0.566 (-0.769, -0.363) | | | | | | | -0.447 (-0.570, -0.323) |
| Number and proportion referred to falls service^d | | | | | | | | | | |
| Model | Factors and covariates | | | | | | | | | |
| | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age² | Distance | Out-of-hours |
| 1 | 18.95 (n/a, n/a) | 14.96 (n/a, n/a) | 17.98 (n/a, n/a) | -15.35 (n/a, n/a) | -18.13 (n/a, n/a) | 0.183 (-0.108, 0.473) | 0.075 (0.004, 0.145) | -1.669 (-3.644, 0.307) | -0.050 (-0.104, 0.003) | 0.469 (0.192, 0.746) |
| 2 | 18.96 (n/a, n/a) | 14.96 (n/a, n/a) | 18.01 (n/a, n/a) | -15.35 (n/a, n/a) | -18.15 (n/a, n/a) | 0.184 (-0.106, 0.474) | 0.075 (0.004, 0.146) | -1.675 (-3.653, 0.303) | -0.050 (-0.103, 0.004) | 0.47 (0.192, 0.748) |
| 3 | 18.95 (n/a, n/a) | 14.95 (n/a, n/a) | 18.00 (n/a, n/a) | -15.35 (n/a, n/a) | -18.15 (n/a, n/a) | | 0.076 (0.006, 0.147) | -1.659 (-3.639, 0.321) | -0.049 (-0.102, 0.005) | 0.467 (0.192, 0.743) |
| 4 | 18.96 (n/a, n/a) | 14.97 (n/a, n/a) | 18.01 (n/a, n/a) | -15.36 (n/a, n/a) | -18.15 (n/a, n/a) | | 0.019 (0.002, 0.037) | | -0.049 (-0.102, 0.005) | 0.45 (0.177, 0.729) |

Table E2. Continued.**Number and proportion referred to falls service^d**

| Model | Factors and covariates | | | | | | | | | |
|-------|----------------------------|------------------------------|----------------------------|----------------------|-------------------------------|--------|----------------------------|------------------|----------|----------------------------|
| | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age ² | Distance | Out- hou |
| 5 | 18.92 (n/a, n/a) | 15.05 (n/a, n/a) | 18.26 (n/a, n/a) | -15.33 (n/a, n/a) | -18.11 (n/a, n/a) | | 0.019 (0.002, 0.036) | | | 0.470 (0.195, 0.744) |
| 6~ | 3.934 (2.789, 5.079) | -0.252 (-0.605, 0.102) | 3.295 (2.060, 4.530) | | -3.122 (-4.374, -1.870) | | 0.019 (0.002, 0.036) | | | 0.469 (0.195, 0.744) |
| 7 | 3.946 (2.801, 5.091) | | 3.480 (2.271, 4.689) | | -3.134 (-4.386, -1.882) | | 0.019 (0.002, 0.036) | | | 0.458 (0.184, 0.732) |

Number and proportion left at scene without any referral

| Model | Factors and covariates | | | | | | | | | |
|-------|-------------------------------|----------------------------|----------------------------|-----------------------------|-----------------------------|------------------------------|------------------------------|-----------------------------|-----------------------------|----------------------------|
| | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age ² | Distance | Out-o hours |
| 1 | -0.429 (-0.784, -0.073) | 0.996 (0.720, 1.272) | 0.378 (0.025, 0.732) | 0.044 (-0.347, 0.435) | 0.150 (-0.321, 0.620) | -0.044 (-0.184, 0.096) | -0.025 (-0.054, 0.003) | 0.758 (-0.072, 1.588) | 0.019 (-0.006, 0.043) | 0.372 (0.238, 0.507) |
| 2 | -0.394 (-0.541, -0.243) | 1.018 (0.815, 1.220) | 0.396 (0.077, 0.715) | | 0.113 (-0.229, 0.455) | -0.044 (-0.184, 0.096) | -0.025 (-0.054, 0.003) | 0.759 (-0.071, 1.590) | 0.019 (-0.006, 0.043) | 0.372 (0.238, 0.507) |
| 3 | -0.390 (-0.539, -0.241) | 1.018 (0.816, 1.221) | 0.397 (0.078, 0.716) | | 0.113 (-0.229, 0.455) | | -0.026 (-0.054, 0.003) | 0.755 (-0.075, 1.585) | 0.018 (-0.006, 0.043) | 0.373 (0.238, 0.508) |
| 4 | -0.369 (-0.503, -0.235) | 1.019 (0.816, 1.221) | 0.450 (0.176, 0.764) | | | | -0.026 (-0.054, 0.003) | 0.756 (-0.074, 1.586) | 0.018 (-0.006, 0.043) | 0.373 (0.238, 0.508) |
| 5 | -0.369 (-0.503, -0.235) | 1.017 (0.815, 1.219) | 0.439 (0.166, 0.712) | | | | -0.026 (-0.054, 0.002) | 0.761 (-0.069, 1.590) | 0.018 (-0.006, 0.043) | 0.374 (0.239, 0.508) |
| 6 | -0.369 (-0.503, -0.236) | 0.983 (0.787, 1.178) | 0.319 (0.083, 0.555) | | | | -0.024 (-0.053, 0.004) | 0.708 (-0.120, 1.536) | | 0.379 (0.244, 0.513) |
| 7 | -0.370 (-0.503, -0.236) | 0.977 (0.782, 1.173) | 0.317 (0.082, 0.553) | | | | -0.001 (-0.009, 0.007) | | | 0.382 (0.247, 0.516) |
| 8 | -0.377 (-0.510, -0.244) | 0.920 (0.729, 1.111) | 0.259 (0.027, 0.491) | | | | | | | 0.385 (0.251, 0.518) |

Number and proportion with recorded respiratory rate

| Model | Factors and covariates | | | | | | | | | |
|-------|------------------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|------------------|-----------------|-----------------|
| | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age ² | Distance | Out-of-hours |
| 1 | 0.190 | 0.767 | 2.464 | 0.111 | -0.122 | 0.059 | 0.049 | -0.979 | 0.017 | -0.146 |
| | (-0.262, 0.642) | (0.349, 1.185) | (1.494, 3.434) | (-0.482, 0.704) | (-1.448, 1.205) | (-0.238, 0.356) | (-0.005, 0.103) | (-2.620, 0.661) | (-0.030, 0.064) | (-0.431, 0.140) |
| 2 | 0.176 | 0.760 | 2.405 | 0.125 | | 0.059 | 0.049 | -0.981 | 0.017 | -0.145 |
| | (-0.249, 0.601) | (0.349, 1.171) | (1.693, 3.116) | (-0.448, 0.698) | | (-0.238, 0.356) | (-0.005, 0.103) | (-2.621, 0.659) | (-0.030, 0.064) | (-0.431, 0.140) |
| 3 | 0.173 | 0.758 | 2.403 | 0.126 | | | 0.050 | -0.975 | 0.017 | -0.146 |
| | (-0.251, 0.598) | (0.347, 1.170) | (1.692, 3.114) | (-0.447, 0.699) | | | (-0.004, 0.103) | (-2.613, 0.663) | (-0.030, 0.064) | (-0.432, 0.139) |
| 4 | 0.242 | 0.818 | 2.404 | | | | 0.049 | -0.966 | 0.017 | -0.147 |
| | (-0.042, 0.527) | (0.508, 1.128) | (1.693, 3.115) | | | | (-0.005, 0.103) | (-2.602, 0.671) | (-0.030, 0.063) | (-0.432, 0.139) |
| 5 | 0.246 | 0.785 | 2.316 | | | | 0.049 | -0.963 | | -0.146 |
| | (-0.038, 0.531) | (0.489, 1.081) | (1.648, 2.983) | | | | (-0.005, 0.103) | (-2.600, 0.675) | | (-0.432, 0.139) |
| 6 | 0.245 | 0.775 | 2.326 | | | | 0.049 | -0.979 | | |
| | (-0.040, 0.529) | (0.480, 1.071) | (1.659, 2.993) | | | | (-0.005, 0.103) | (-2.613, 0.655) | | |
| 7 | 0.247 | 0.781 | 2.329 | | | | 0.019 | | | |
| | (-0.037, 0.532) | (0.485, 1.076) | (1.662, 2.996) | | | | (0.001, 0.036) | | | |
| 8 | 0.245 | 0.785 | 2.398 | | | | 0.018 | | | |
| | (-0.038, 0.528) | (0.492, 1.079) | (1.734, 3.062) | | | | (0.001, 0.035) | | | |

Number and proportion with recorded pulse rates

| Model | Factors and covariates | | | | | | | | | |
|-------|------------------------|----------------|----------------|-----------------|-----------------|-----------------|----------------|------------------|-----------------|-----------------|
| | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age ² | Distance | Out-of-hours |
| 1 | 0.255 | 1.376 | 1.865 | 0.033 | -0.404 | 0.269 | 0.073 | -1.752 | 0.005 | -0.098 |
| | (-0.169, 0.679) | (0.940, 1.812) | (1.124, 2.606) | (-0.595, 0.662) | (-1.341, 0.533) | (-0.031, 0.570) | (0.020, 0.126) | (-3.376, -0.127) | (-0.043, 0.054) | (-0.394, 0.197) |
| 2 | 0.254 | 1.376 | 1.861 | 0.034 | -0.403 | 0.269 | 0.073 | -1.751 | 0.005 | -0.098 |
| | (-0.170, 0.678) | (0.941, 1.812) | (1.125, 2.596) | (-0.595, 0.662) | (-1.339, 0.534) | (-0.031, 0.570) | (0.020, 0.125) | (-3.375, -0.127) | (-0.043, 0.054) | (-0.394, 0.197) |
| 3 | 0.269 | 1.392 | 1.868 | | -0.418 | 0.270 | 0.072 | -1.749 | 0.005 | -0.099 |
| | (-0.044, 0.583) | (1.064, 1.720) | (1.144, 2.591) | | (-1.310, 0.474) | (-0.031, 0.570) | (0.019, 0.125) | (-3.372, -0.125) | (-0.043, 0.053) | (-0.394, 0.197) |
| 4 | 0.271 | 1.382 | 1.842 | | -0.420 | 0.271 | 0.072 | -1.749 | | -0.099 |
| | (-0.042, 0.584) | (1.068, 1.696) | (1.161, 2.523) | | (-1.312, 0.471) | (-0.030, 0.571) | (0.019, 0.125) | (-3.373, -0.125) | | (-0.394, 0.197) |
| 5 | 0.273 | 1.379 | 1.833 | | -0.428 | 0.270 | 0.073 | -1.756 | | -0.098 |
| | (-0.040, 0.586) | (1.065, 1.692) | (1.153, 2.514) | | (-1.319, 0.463) | (-0.030, 0.570) | (0.020, 0.126) | (-3.377, -0.134) | | (-0.393, 0.198) |

Table E2. Continued.

| Number and proportion with recorded pulse rates | | | | | | | | | | |
|---|-------------------------------|-------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|-------------------------------|-----------------------------|------------------------------|
| Model | Factors and covariates | | | | | | | | | |
| | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age² | Distance | Out-o hours |
| 6 | 0.271 (-0.041, 0.584) | 1.372 (1.059, 1.685) | 1.839 (1.159, 2.519) | | -0.424 (-1.315, 0.467) | 0.271 (-0.029, 0.571) | 0.073 (0.020, 0.126) | -1.769 (-3.387, -0.150) | | |
| 7 | 0.208 (-0.083, 0.498) | 1.374 (1.064, 1.684) | 1.666 (1.202, 2.131) | | | 0.285 (-0.012, 0.583) | 0.069 (0.016, 0.122) | -1.670 (-3.289, -0.050) | | |
| 8 | 0.195 (-0.094, 0.485) | 1.364 (1.054, 1.674) | 1.649 (1.185, 2.113) | | | | 0.071 (0.018, 0.123) | -1.631 (-3.240, -0.023) | | |
| Number and proportion with recorded level of consciousness | | | | | | | | | | |
| Model | Factors and covariates | | | | | | | | | |
| | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age² | Distance | Out-o hours |
| 1 | 0.033 (-0.859, 0.925) | -0.858 (-1.569, -0.148) | -0.547 (-1.398, 0.303) | -0.051 (-1.008, 0.906) | 0.297 (-0.831, 1.424) | -0.002 (-0.309, 0.304) | -0.013 (-0.078, 0.053) | 0.472 (-1.453, 2.398) | 0.018 (-0.038, 0.073) | -0.064 (-0.362, 0.233) |
| 2 | 0.033 (-0.858, 0.925) | -0.858 (-1.569, -0.148) | -0.547 (-1.398, 0.304) | -0.051 (-1.008, 0.906) | 0.297 (-0.831, 1.424) | | -0.013 (-0.078, 0.053) | 0.472 (-1.454, 2.398) | 0.018 (-0.038, 0.073) | -0.064 (-0.361, 0.233) |
| 3 | -0.011 (-0.335, 0.313) | -0.886 (-1.375, -0.397) | -0.571 (-1.297, 0.154) | | 0.341 (-0.421, 1.103) | | -0.013 (-0.078, 0.053) | 0.471 (-1.455, 2.397) | 0.018 (-0.038, 0.073) | -0.064 (-0.361, 0.233) |
| 4 | -0.012 (-0.336, 0.312) | -0.889 (-1.378, -0.399) | -0.571 (-1.296, 0.155) | | 0.342 (-0.420, 1.104) | | | 0.110 (-0.435, 0.654) | 0.018 (-0.038, 0.073) | -0.063 (-0.360, 0.234) |
| 5 | -0.010 (-0.334, 0.314) | -0.888 (-1.377, -0.398) | -0.574 (-1.299, 0.152) | | 0.341 (-0.421, 1.102) | | | | 0.018 (-0.038, 0.073) | -0.060 (-0.357, 0.237) |
| 6 | -0.011 (-0.335, 0.313) | -0.892 (-1.380, -0.403) | -0.569 (-1.294, 0.156) | | 0.342 (-0.420, 1.104) | | | | 0.018 (-0.038, 0.073) | |
| 7 | -0.010 (-0.334, 0.314) | -0.927 (-1.404, -0.450) | -0.661 (-1.329, 0.006) | | 0.338 (-0.423, 1.100) | | | | | |
| 8 | 0.052 (-0.241, 0.345) | -0.923 (-1.400, -0.446) | -0.495 (-1.059, 0.069) | | | | | | | |
| 9 | 0.052 (-0.241, 0.344) | -0.934 (-1.411, -0.458) | -0.516 (-1.077, 0.045) | | | | | | | |

| | | | |
|----|-----------------------------|-------------------------------|------------------------------|
| 10 | 0.053 (-0.240, 0.345) | -0.923 (-1.399, -0.447) | -0.479 (-1.039, 0.080) |
| 11 | 0.057 (-0.236, 0.349) | -0.649 (-0.971, -0.327) | |

Duration of job cycle time (in minutes)

| Model | Factors and covariates | | | | | | | | | |
|-------|-----------------------------|-------------------------------|-----------------------------|-------------------------------|-------------------------------|------------------------------|-----------------------------|--------------------------------|----------------------------|-------------------------------|
| | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age ² | Distance | Out- hours |
| 1 | 5.526 (0.136, 10.937) | -2.414 (-7.095, 2.267) | 2.226 (-3.782, 8.233) | -5.260 (-11.536, 1.017) | -4.364 (-11.882, 3.155) | -0.389 (-2.940, 2.163) | 0.184 (-0.346, 0.713) | -4.096 (-19.641, 11.450) | 1.819 (1.371, 2.268) | -6.171 (-8.659, -3.683) |
| 2 | 5.552 (0.153, 10.951) | -2.406 (-7.086, 2.274) | 2.237 (-3.770, 8.243) | -5.259 (-11.534, 1.017) | -4.361 (-11.879, 3.157) | | 0.181 (-0.349, 0.711) | -4.125 (-19.668, 11.417) | 1.817 (1.369, 2.265) | -6.163 (-8.650, -3.676) |
| 3 | 5.587 (0.190, 10.984) | -2.363 (-7.040, 2.313) | 2.267 (-3.738, 8.272) | -5.292 (-11.566, 0.981) | -4.400 (-11.915, 3.116) | | 0.046 (-0.106, 0.199) | | 1.817 (1.369, 2.265) | -6.185 (-8.671, -3.700) |
| 4 | 6.039 (0.688, 11.390) | -1.780 (-6.424, 2.863) | 2.746 (-3.235, 8.728) | -5.725 (-11.961, 0.511) | -4.856 (-12.340, 2.628) | | | | 1.803 (1.356, 2.250) | -6.218 (-8.697, -3.739) |
| 5~ | 4.863 (0.165, 9.561) | -3.123 (-6.730, 0.483) | | -4.548 (-10.233, 1.137) | -2.585 (-8.202, 3.031) | | | | 1.726 (1.311, 2.140) | -6.260 (-8.737, -3.782) |
| 6 | 3.552 (-0.184, 7.287) | -3.215 (-6.815, 0.386) | | -3.237 (-8.157, 1.683) | | | | | 1.806 (1.430, 2.182) | -6.215 (-8.691, -3.740) |
| 7 | 1.685 (-0.746, 4.117) | -4.909 (-7.426, -2.392) | | | | | | | 1.813 (1.437, 2.188) | -6.221 (-8.697, -3.745) |

Duration of episode of care (in minutes)

| Model | Factors and covariates | | | | | | | | | |
|-------|--------------------------------|----------------------------------|-------------------------------|-------------------------------|-------------------------------|------------------------------|-----------------------------|--------------------------------|-----------------------------|----------------------------|
| | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age ² | Distance | Out- hours |
| 1 | -5.262 (-24.752, 14.228) | -28.235 (-45.131, -11.340) | 6.184 (-15.472, 27.840) | 8.645 (-13.983, 31.272) | 9.489 (-17.611, 36.590) | -0.146 (-9.326, 9.034) | 0.863 (-1.042, 2.768) | -5.167 (-61.077, 50.743) | 1.105 (-0.509, 2.719) | -20.3 (-29.3, -11.4) |
| 2 | -5.256 (-24.741, 14.228) | -28.233 (-45.126, -11.340) | 6.188 (-15.465, 27.840) | 8.645 (-13.980, 31.270) | 9.490 (-17.607, 36.588) | | 0.862 (-1.042, 2.766) | -5.181 (-61.078, 50.717) | 1.104 (-0.508, 2.717) | -20.3 (-29.3, -11.4) |
| 3 | -5.211 (-24.688, 14.265) | -28.176 (-45.057, -11.296) | 6.228 (-15.418, 27.874) | 8.602 (-14.016, 31.220) | 9.440 (-17.650, 36.529) | | 0.693 (0.146, 1.240) | | 1.104 (-0.509, 2.716) | -20.4 (-29.3, -11.4) |

Table E2. Continued.**Duration of episode of care (in minutes)**

| Model | Factors and covariates | | | | | | | | | |
|-------|-------------------------------|----------------------------------|-------|-------------------------------|-------------------------------|--------|----------------------------|------------------|-----------------------------|----------------------------|
| | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age ² | Distance | Out-ho |
| 4 | -7.918 (-24.970, 9.135) | -31.261 (-44.299, -18.223) | | 11.311 (-9.253, 31.874) | 14.596 (-5.717, 34.909) | | 0.691 (0.144, 1.238) | | 0.931 (-0.565, 2.427) | -20.4 (-29.4, -11.5) |
| 5 | -0.144 (-9.688, 9.399) | -26.630 (-36.585, -16.674) | | | 8.953 (-8.579, 26.484) | | 0.685 (0.138, 1.231) | | 0.736 (-0.717, 2.190) | -20.5 (-29.5, -11.6) |
| 6 | 0.632 (-8.762, 10.026) | -26.864 (-36.755, -16.972) | | | 6.597 (-9.623, 22.818) | | 0.662 (0.119, 1.206) | | | -20.5 (-29.4, -11.6) |
| 7 | 2.048 (-6.677, 10.772) | -28.524 (-37.534, -19.514) | | | | | 0.654 (0.110, 1.197) | | | -20.6 (-29.5, -11.7) |

At 1 month**Number and proportion with further self reported falls**

| Model | Factors and covariates | | | | | | | | | |
|-------|-------------------------------|------------------------------|-----------------------------|-----------------------------|------------------------------|------------------------------|-----------------------------|-----------------------------|------------------------------|-----------------------------|
| | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age ² | Distance | Out-c hour |
| 1 | -0.341 (-0.812, 0.130) | -0.099 (-0.532, 0.334) | 0.074 (-0.505, 0.653) | 0.455 (-0.129, 1.039) | -0.179 (-0.880, 0.523) | -0.213 (-0.473, 0.047) | 0.010 (-0.044, 0.065) | 0.019 (-1.647, 1.686) | -0.008 (-0.051, 0.035) | 0.191 (-0.065, 0.447) |
| 2 | -0.341 (-0.812, 0.130) | -0.099 (-0.532, 0.333) | 0.074 (-0.504, 0.653) | 0.455 (-0.129, 1.039) | -0.179 (-0.880, 0.523) | -0.213 (-0.473, 0.047) | 0.011 (-0.004, 0.026) | | -0.008 (-0.051, 0.035) | 0.191 (-0.065, 0.447) |
| 3 | -0.342 (-0.812, 0.128) | -0.100 (-0.533, 0.332) | 0.080 (-0.491, 0.652) | 0.455 (-0.129, 1.039) | -0.179 (-0.881, 0.523) | -0.213 (-0.473, 0.047) | 0.011 (-0.004, 0.026) | | -0.008 (-0.051, 0.035) | 0.191 (-0.065, 0.447) |
| 4 | -0.372 (-0.792, 0.048) | -0.135 (-0.494, 0.224) | | 0.486 (-0.058, 1.029) | -0.111 (-0.619, 0.397) | -0.215 (-0.475, 0.044) | 0.011 (-0.004, 0.026) | | -0.010 (-0.050, 0.030) | 0.191 (-0.065, 0.446) |
| 5 | -0.423 (-0.772, -0.074) | -0.138 (-0.497, 0.220) | | 0.536 (0.044, 1.028) | | -0.215 (-0.474, 0.045) | 0.011 (-0.004, 0.026) | | -0.006 (-0.043, 0.030) | 0.193 (-0.062, 0.449) |
| 6 | -0.425 (-0.774, -0.077) | -0.143 (-0.501, 0.214) | | 0.537 (0.044, 1.029) | | -0.217 (-0.476, 0.043) | 0.011 (-0.004, 0.026) | | | 0.191 (-0.064, 0.446) |
| 7 | -0.348 (-0.636, -0.059) | | | 0.394 (0.054, 0.735) | | -0.216 (-0.475, 0.044) | 0.011 (-0.004, 0.026) | | | 0.184 (-0.071, 0.438) |
| 8 | -0.345 (-0.633, -0.056) | | | 0.398 (0.058, 0.738) | | -0.197 (-0.454, 0.061) | | | | 0.184 (-0.070, 0.439) |

| | | | |
|----|-------------------------------|----------------------------|------------------------------|
| 9 | -0.357 (-0.645, -0.070) | 0.418 (0.079, 0.757) | -0.197 (-0.455, 0.060) |
| 10 | -0.332 (-0.617, -0.047) | 0.422 (0.084, 0.759) | |
| 11 | -0.325 (-0.609, -0.040) | 0.413 (0.076, 0.750) | |

Number and proportion with further fractures

| Model | Group | Site1 | Site3 | Factors and covariates | | | | | | |
|-------|-----------------------------|-------------------------------|------------------------------|------------------------------|------------------------------|----------------------------|-------------------------------|-----------------------------|----------------------------|------------------------------|
| | | | | Group #Site1 | Group #Site3 | Gender | Age | Age ² | Distance | Out-hospital |
| 1 | 0.246 (-0.277, 0.770) | -0.515 (-1.035, 0.005) | -0.032 (-0.701, 0.637) | -0.305 (-0.992, 0.383) | -0.486 (-1.316, 0.345) | 0.436 (0.103, 0.769) | -0.050 (-0.107, 0.007) | 0.901 (-0.861, 2.662) | 0.054 (0.002, 0.105) | -0.183 (-0.494, 0.127) |
| 2 | 0.258 (-0.210, 0.726) | -0.501 (-0.935, -0.068) | | -0.316 (-0.961, 0.329) | -0.511 (-1.157, 0.136) | 0.436 (0.104, 0.769) | -0.050 (-0.107, 0.007) | 0.903 (-0.857, 2.664) | 0.055 (0.008, 0.101) | -0.183 (-0.493, 0.128) |
| 3 | 0.257 (-0.210, 0.724) | -0.504 (-0.935, -0.073) | | -0.315 (-0.960, 0.329) | -0.509 (-1.154, 0.137) | 0.436 (0.103, 0.769) | -0.050 (-0.107, 0.007) | 0.903 (-0.858, 2.663) | 0.055 (0.008, 0.101) | -0.182 (-0.493, 0.128) |
| 4 | 0.254 (-0.212, 0.721) | -0.505 (-0.936, -0.075) | | -0.313 (-0.957, 0.332) | -0.503 (-1.148, 0.141) | 0.436 (0.104, 0.769) | -0.050 (-0.107, 0.007) | 0.901 (-0.858, 2.661) | 0.054 (0.008, 0.101) | -0.183 (-0.493, 0.128) |
| 5 | 0.091 (-0.234, 0.415) | -0.648 (-0.965, -0.330) | | | -0.389 (-0.992, 0.215) | 0.437 (0.104, 0.769) | -0.049 (-0.106, 0.008) | 0.884 (-0.874, 2.641) | 0.059 (0.014, 0.104) | -0.181 (-0.491, 0.129) |
| 6 | 0.088 (-0.237, 0.412) | -0.650 (-0.967, -0.333) | | | -0.385 (-0.989, 0.218) | 0.438 (0.106, 0.770) | -0.022 (-0.040, -0.003) | | 0.060 (0.015, 0.104) | -0.176 (-0.487, 0.134) |
| 7 | 0.085 (-0.239, 0.409) | -0.664 (-0.980, -0.348) | | | -0.373 (-0.976, 0.231) | 0.442 (0.110, 0.774) | -0.022 (-0.041, -0.004) | | 0.059 (0.014, 0.104) | |
| 8 | 0.002 (-0.296, 0.301) | -0.596 (-0.897, -0.296) | | | | 0.443 (0.111, 0.775) | -0.022 (-0.040, -0.003) | | 0.071 (0.031, 0.112) | |

Days spent in hospital

| Model | Group | Site1 | Site3 | Factors and covariates | | | | | | |
|-------|----------------------------|-------------------------------|------------------------------|-------------------------------|-------------------------------|------------------------------|----------------------------|------------------------------|-----------------------------|-------------------------------|
| | | | | Group #Site1 | Group #Site3 | Gender | Age | Age ² | Distance | Out-hospital |
| 1 | 1.793 (0.463, 3.123) | -1.506 (-2.660, -0.351) | -0.330 (-1.808, 1.148) | -1.540 (-3.088, 0.008) | -2.044 (-3.895, -0.192) | -0.370 (-1.000, 0.260) | 0.259 (0.128, 0.390) | -3.707 (-7.558, 0.143) | 0.014 (-0.097, 0.124) | -0.730 (-1.344, -0.115) |
| 2 | 1.817 (0.490, 3.143) | -1.539 (-2.677, -0.401) | -0.497 (-1.859, 0.866) | -1.565 (-3.110, -0.020) | -1.851 (-3.689, -0.013) | -0.419 (-1.047, 0.209) | 0.249 (0.118, 0.380) | -3.446 (-7.282, 0.389) | | -0.725 (-1.338, -0.111) |

Table E2. Continued.

| Days spent in hospital | | | | | | | | | | |
|-------------------------------|--------------------------|----------------------------|-------------------------|----------------------------|----------------------------|---------------------------|----------------------------|---------------------------|--------------------------|----------------------------|
| Factors and covariates | | | | | | | | | | |
| Model | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age² | Distance | Out-hour |
| 3 | 2.080 (0.967, 3.193) | -1.278 (-2.163, -0.393) | | -1.828 (-3.194, -0.462) | -2.341 (-3.596, -1.086) | -0.412 (-1.040, 0.215) | 0.248 (0.118, 0.379) | -3.421 (-7.255, 0.413) | | -0.71 (-1.33, -0.103) |
| 4 | 2.082 (0.969, 3.195) | -1.279 (-2.164, -0.395) | | -1.813 (-3.179, -0.447) | -2.316 (-3.571, -1.061) | | 0.246 (0.115, 0.377) | -3.456 (-7.290, 0.379) | | -0.709 (-1.32, -0.096) |
| 5 | 2.100 (0.986, 3.213) | -1.255 (-2.140, -0.371) | | -1.827 (-3.193, -0.461) | -2.326 (-3.580, -1.071) | | 0.133 (0.096, 0.171) | | | -0.727 (-1.34, -0.114) |
| 6 | 2.045 (0.933, 3.157) | -1.352 (-2.231, -0.473) | | -1.779 (-3.145, -0.414) | -2.232 (-3.483, -0.981) | | 0.133 (0.095, 0.170) | | | -0.719 (-1.33, -0.106) |
| 7 | 2.005 (0.894, 3.117) | -1.366 (-2.245, -0.487) | | -1.739 (-3.104, -0.374) | -2.137 (-3.385, -0.890) | | 0.133 (0.095, 0.170) | | | -0.725 (-1.33, -0.112) |
| SF12 MCS | | | | | | | | | | |
| Factors and covariates | | | | | | | | | | |
| Model | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age² | Distance | Out-hour |
| 1 | 1.542 (-1.689, 4.774) | 4.676 (1.756, 7.596) | 4.238 (0.366, 8.110) | -1.439 (-5.405, 2.527) | -0.490 (-5.255, 4.276) | -1.659 (-3.400, 0.082) | -0.214 (-0.570, 0.143) | 3.665 (-7.290, 14.620) | 0.163 (-0.127, 0.453) | -1.847 (-3.564, -0.130) |
| 2 | 1.318 (-1.062, 3.698) | 4.555 (1.887, 7.223) | 3.978 (1.052, 6.903) | -1.215 (-4.525, 2.095) | | -1.665 (-3.404, 0.075) | -0.214 (-0.570, 0.143) | 3.676 (-7.271, 14.624) | 0.164 (-0.125, 0.454) | -1.847 (-3.563, -0.131) |
| 3 | 1.298 (-1.080, 3.675) | 4.553 (1.886, 7.220) | 3.986 (1.062, 6.910) | -1.205 (-4.514, 2.104) | | -1.687 (-3.423, 0.050) | -0.212 (-0.568, 0.145) | 3.602 (-7.337, 14.541) | 0.168 (-0.121, 0.456) | -1.865 (-3.579, -0.151) |
| 4 | 1.264 (-1.111, 3.638) | 4.542 (1.876, 7.208) | 4.001 (1.079, 6.923) | -1.210 (-4.518, 2.098) | | -1.704 (-3.439, 0.031) | -0.099 (-0.202, 0.004) | | 0.172 (-0.117, 0.460) | -1.843 (-3.555, -0.131) |
| 5 | 0.645 (-1.023, 2.314) | 3.912 (1.878, 5.947) | 4.009 (1.087, 6.930) | | | -1.692 (-3.426, 0.042) | -0.099 (-0.202, 0.003) | | 0.174 (-0.114, 0.463) | -1.850 (-3.561, -0.138) |
| 6 | 0.732 (-0.928, 2.393) | 3.938 (1.904, 5.972) | 3.608 (0.780, 6.436) | | | -1.671 (-3.405, 0.063) | -0.100 (-0.203, 0.002) | | 0.168 (-0.120, 0.456) | -1.824 (-3.535, -0.113) |
| 7 | 0.768 (-0.881, 2.417) | 3.712 (1.747, 5.677) | 2.741 (0.398, 5.084) | | | -1.631 (-3.354, 0.091) | -0.099 (-0.201, 0.003) | | | -1.836 (-3.537, -0.136) |
| 8 | 0.902 (-0.744, 2.547) | 3.811 (1.846, 5.776) | 2.805 (0.459, 5.150) | | | | -0.108 (-0.210, -0.006) | | | -1.806 (-3.509, -0.103) |

SF12 PCS

| Factors and covariates | | | | | | | | | | |
|------------------------|---------------------------|--------------------------|--------------------------|---------------------------|--------------------------|---------------------------|---------------------------|----------------------------|--------------------------|----------------------------|
| Model | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age ² | Distance | Out-of-hours |
| 1 | -0.427 (-3.092, 2.237) | 1.352 (-1.055, 3.760) | 1.431 (-1.762, 4.624) | -0.412 (-3.682, 2.858) | 0.802 (-3.127, 4.731) | -0.682 (-2.117, 0.754) | -0.030 (-0.324, 0.264) | -3.476 (-12.508, 5.556) | 0.046 (-0.193, 0.285) | -1.695 (-3.110, -0.279) |
| 2 | -0.435 (-3.097, 2.226) | 1.350 (-1.056, 3.756) | 1.440 (-1.749, 4.630) | -0.414 (-3.682, 2.854) | 0.801 (-3.126, 4.727) | -0.690 (-2.122, 0.742) | | -4.364 (-6.966, -1.761) | 0.048 (-0.191, 0.286) | -1.690 (-3.104, -0.276) |
| 3 | -0.449 (-3.107, 2.208) | 1.347 (-1.057, 3.752) | 1.509 (-1.621, 4.639) | -0.417 (-3.683, 2.849) | 0.801 (-3.124, 4.725) | -0.694 (-2.125, 0.737) | | -4.364 (-6.966, -1.761) | 0.049 (-0.189, 0.287) | -1.695 (-3.107, -0.282) |
| 4 | -0.724 (-2.279, 0.830) | 1.127 (-0.550, 2.805) | 1.365 (-1.553, 4.283) | | 1.076 (-2.200, 4.352) | -0.694 (-2.125, 0.736) | | -4.354 (-6.953, -1.755) | 0.050 (-0.187, 0.288) | -1.696 (-3.108, -0.285) |
| 5 | -0.702 (-2.246, 0.843) | 1.045 (-0.574, 2.663) | 1.274 (-1.346, 3.893) | | 0.820 (-2.409, 4.050) | -0.679 (-2.098, 0.740) | | -4.345 (-6.929, -1.760) | | -1.679 (-3.081, -0.277) |
| 6 | -0.515 (-1.873, 0.843) | 1.056 (-0.561, 2.673) | 1.724 (-0.205, 3.652) | | | -0.667 (-2.085, 0.750) | | -4.360 (-6.942, -1.778) | | -1.682 (-3.083, -0.282) |
| 7 | -0.527 (-1.884, 0.830) | 1.058 (-0.558, 2.675) | 1.711 (-0.216, 3.639) | | | -0.690 (-2.105, 0.725) | | -4.372 (-6.954, -1.791) | | -1.700 (-3.099, -0.300) |
| 8 | -0.471 (-1.823, 0.881) | 1.099 (-0.515, 2.713) | 1.739 (-0.188, 3.665) | | | | | -4.469 (-7.042, -1.895) | | -1.686 (-3.085, -0.287) |
| 9 | -0.512 (-1.864, 0.839) | | 1.026 (-0.592, 2.644) | | | | | -4.468 (-7.043, -1.893) | | -1.649 (-3.048, -0.251) |
| 10 | -0.495 (-1.847, 0.856) | | | | | | | -4.574 (-7.144, -2.004) | | -1.744 (-3.135, -0.353) |

Modified Falls Efficacy Scale

| Factors and covariates | | | | | | | | | | |
|------------------------|--------------------------|-------------------------|--------------------------|---------------------------|--------------------------|--------------------------|----------------------------|---------------------------|--------------------------|----------------------------|
| Model | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age ² | Distance | Out-of-hours |
| 1 | 0.041 (-0.601, 0.683) | 0.963 (0.383, 1.543) | 0.630 (-0.142, 1.401) | -0.230 (-1.021, 0.561) | 0.227 (-0.728, 1.183) | 0.075 (-0.272, 0.422) | -0.098 (-0.173, -0.023) | -0.099 (-2.362, 2.164) | 0.035 (-0.023, 0.093) | -0.654 (-0.997, -0.312) |
| 2 | 0.041 (-0.601, 0.683) | 0.963 (0.383, 1.543) | 0.629 (-0.142, 1.400) | -0.229 (-1.020, 0.562) | 0.228 (-0.727, 1.183) | 0.075 (-0.272, 0.422) | -0.101 (-0.122, -0.081) | | 0.035 (-0.023, 0.093) | -0.654 (-0.997, -0.312) |
| 3 | 0.036 (-0.606, 0.677) | 0.958 (0.379, 1.537) | 0.619 (-0.152, 1.388) | -0.228 (-1.019, 0.562) | 0.234 (-0.721, 1.188) | | -0.101 (-0.122, -0.080) | | 0.035 (-0.023, 0.093) | -0.656 (-0.998, -0.314) |

Table E2. Continued.

| Modified Falls Efficacy Scale | | | | | | | | | | |
|--------------------------------------|-------------------------------|----------------------------|-----------------------------|------------------------------|-----------------------------|-----------------------------|-------------------------------|-----------------------------|------------------------------|-------------------------------|
| Model | Factors and covariates | | | | | | | | | |
| | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age² | Distance | Out- hours |
| 4 | 0.141 (-0.333, 0.616) | 1.015 (0.485, 1.545) | 0.743 (0.162, 1.323) | -0.334 (-0.996, 0.328) | | | -0.101 (-0.122, -0.081) | | 0.034 (-0.024, 0.092) | -0.658 (-1.000, -0.316) |
| 5 | -0.030 (-0.362, 0.302) | 0.843 (0.437, 1.248) | 0.745 (0.164, 1.325) | | | | -0.101 (-0.122, -0.080) | | 0.035 (-0.023, 0.093) | -0.657 (-0.999, -0.316) |
| 6 | -0.037 (-0.366, 0.293) | 0.798 (0.404, 1.191) | 0.589 (0.103, 1.075) | | | | -0.101 (-0.121, -0.080) | | | -0.658 (-0.999, -0.318) |
| 7 | -0.053 (-0.382, 0.277) | 0.781 (0.388, 1.174) | 0.694 (0.223, 1.166) | | | | -0.100 (-0.121, -0.080) | | | -0.652 (-0.999, -0.312) |
| 8 | -0.055 (-0.385, 0.275) | 0.789 (0.395, 1.182) | 0.689 (0.217, 1.161) | | | | -0.100 (-0.121, -0.079) | | | -0.655 (-0.999, -0.314) |
| QCM Technical | | | | | | | | | | |
| Model | Factors and covariates | | | | | | | | | |
| | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age² | Distance | Out- hours |
| 1 | -0.082 (-1.940, 1.775) | 2.133 (0.464, 3.801) | 1.188 (-1.004, 3.380) | -0.509 (-2.788, 1.771) | 0.681 (-2.082, 3.443) | 0.497 (-0.508, 1.503) | -0.020 (-0.235, 0.195) | 0.259 (-6.196, 6.715) | -0.108 (-0.278, 0.061) | -0.132 (-1.117, 0.853) |
| 2 | -0.084 (-1.940, 1.772) | 2.132 (0.465, 3.800) | 1.190 (-1.000, 3.381) | -0.509 (-2.787, 1.769) | 0.680 (-2.081, 3.442) | 0.497 (-0.508, 1.502) | -0.012 (-0.071, 0.048) | | -0.108 (-0.277, 0.062) | -0.131 (-1.116, 0.853) |
| 3 | -0.082 (-1.936, 1.772) | 2.130 (0.465, 3.796) | 1.206 (-0.979, 3.390) | -0.481 (-2.756, 1.794) | 0.697 (-2.058, 3.453) | 0.481 (-0.522, 1.484) | -0.012 (-0.071, 0.048) | | -0.104 (-0.273, 0.065) | |
| 4 | -0.122 (-1.965, 1.721) | 2.113 (0.458, 3.768) | 1.242 (-0.931, 3.415) | -0.444 (-2.710, 1.822) | 0.735 (-2.012, 3.482) | 0.450 (-0.543, 1.444) | | | -0.096 (-0.265, 0.072) | |
| 5 | -0.414 (-1.493, 0.664) | 1.884 (0.713, 3.054) | 1.091 (-0.940, 3.122) | | 1.028 (-1.274, 3.330) | 0.447 (-0.545, 1.440) | | | -0.095 (-0.263, 0.073) | |
| 6 | -0.189 (-1.143, 0.764) | 1.893 (0.723, 3.063) | 1.613 (-0.047, 3.274) | | | 0.468 (-0.524, 1.459) | | | -0.097 (-0.265, 0.071) | |
| 7 | -0.214 (-1.166, 0.738) | 1.864 (0.696, 3.032) | 1.567 (-0.091, 3.224) | | | | | | -0.099 (-0.267, 0.069) | |
| 8 | -0.267 (-1.214, 0.680) | 2.019 (0.891, 3.146) | 2.066 (0.674, 3.459) | | | | | | | |

| | | | |
|----|------------------------------|----------------------------|----------------------------|
| 9 | -0.270 (-1.217, 0.676) | 2.018 (0.891, 3.146) | 2.059 (0.667, 3.452) |
| 10 | -0.320 (-1.265, 0.625) | 1.958 (0.833, 3.083) | 2.298 (0.941, 3.654) |

QCM Interpersonal

| Model | Factors and covariates | | | | | | | | | |
|-------|------------------------|------------------------|------------------------|-------------------------|-------------------------|-----------------------|------------------------|------------------------|------------------------|------------------------|
| | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age ² | Distance | Out-of-hours |
| 1 | 3.033 (0.988, 5.078) | -0.208 (-2.045, 1.629) | -0.359 (-2.772, 2.055) | -3.369 (-5.878, -0.860) | -2.251 (-5.292, 0.790) | 0.155 (-0.952, 1.262) | -0.015 (-0.252, 0.222) | -0.578 (-7.685, 6.529) | -0.041 (-0.228, 0.146) | -1.015 (-2.069, 0.069) |
| 2 | 3.029 (0.986, 5.072) | -0.213 (-2.047, 1.621) | -0.337 (-2.716, 2.043) | -3.369 (-5.877, -0.861) | -2.253 (-5.293, 0.787) | 0.154 (-0.952, 1.261) | -0.015 (-0.252, 0.222) | -0.581 (-7.685, 6.522) | -0.041 (-0.228, 0.146) | -1.015 (-2.069, 0.069) |
| 3 | 3.025 (0.984, 5.066) | -0.213 (-2.046, 1.620) | -0.331 (-2.708, 2.046) | -3.369 (-5.876, -0.862) | -2.253 (-5.291, 0.786) | 0.152 (-0.954, 1.257) | -0.015 (-0.252, 0.222) | -0.578 (-7.685, 6.522) | -0.041 (-0.228, 0.146) | -1.014 (-2.069, 0.069) |
| 4 | 3.167 (1.529, 4.805) | | -0.172 (-2.120, 1.775) | -3.575 (-5.345, -1.806) | -2.394 (-5.177, 0.389) | 0.159 (-0.944, 1.261) | | -1.015 (-2.977, 0.947) | -0.037 (-0.222, 0.147) | -1.018 (-2.069, 0.065) |
| 5 | 3.189 (1.572, 4.807) | | | -3.563 (-5.327, -1.800) | -2.533 (-4.833, -0.232) | 0.164 (-0.937, 1.265) | | -1.008 (-2.968, 0.951) | -0.031 (-0.204, 0.141) | -1.013 (-2.069, 0.068) |
| 6 | 3.183 (1.567, 4.799) | | | -3.568 (-5.331, -1.805) | -2.533 (-4.832, -0.233) | | | -0.997 (-2.924, 0.970) | -0.031 (-0.203, 0.141) | -1.016 (-2.069, 0.064) |
| 7 | 3.126 (1.577, 4.675) | | | -3.503 (-5.223, -1.783) | -2.440 (-4.503, -0.377) | | | -0.969 (-2.911, 0.974) | | -0.970 (-2.069, 0.106) |
| 8 | 3.129 (1.581, 4.677) | | | -3.508 (-5.227, -1.789) | -2.447 (-4.509, -0.385) | | | -0.970 (-2.912, 0.971) | | -0.972 (-2.069, 0.103) |
| 9 | 3.083 (1.536, 4.630) | | | -3.487 (-5.206, -1.769) | -2.385 (-4.443, -0.327) | | | | | -0.937 (-2.069, 0.136) |
| 10 | 3.132 (1.587, 4.678) | | | -3.584 (-5.299, -1.869) | -2.293 (-4.349, -0.237) | | | | | |

At 6 months

Number and proportion with further self reported falls

| Model | Factors and covariates | | | | | | | | | |
|-------|------------------------|----------------------|-----------------------|-------------------------|-----------------------|-------------------------|----------------------|------------------------|----------------------|-----------------------|
| | Group | Site2 | Site 3 | Group #Site2 | Group #Site3 | Gender | Age | Age ² | Distance | Out-of-hours |
| 1 | 0.372 (-0.095, 0.838) | 0.823 (0.106, 1.541) | 0.667 (-0.005, 1.339) | -1.352 (-2.277, -0.427) | 0.077 (-0.774, 0.929) | -0.402 (-0.767, -0.036) | 0.073 (0.000, 0.146) | -1.409 (-3.743, 0.925) | 0.070 (0.006, 0.134) | 0.024 (-0.334, 0.382) |

Table E2. Continued.**At 6 months****Number and proportion with further self reported falls**

| Model | Group | Site2 | Site 3 | Factors and covariates | | | | | | | Out-of-hour |
|-------|-----------------|----------------|-----------------|------------------------|-----------------|------------------|----------------|------------------|----------------|--|-------------|
| | | | | Group #Site2 | Group #Site3 | Gender | Age | Age ² | Distance | | |
| 2 | 0.371 | 0.821 | 0.666 | -1.349 | 0.075 | -0.403 | 0.073 | -1.403 | 0.070 | | |
| | (-0.095, 0.837) | (0.105, 1.536) | (-0.006, 1.337) | (-2.274, -0.425) | (-0.776, 0.926) | (-0.768, -0.037) | (0.000, 0.145) | (-3.735, 0.930) | (0.006, 0.134) | | |
| 3 | 0.370 | 0.820 | 0.664 | -1.350 | 0.076 | -0.402 | 0.073 | -1.402 | 0.070 | | |
| | (-0.096, 0.837) | (0.104, 1.536) | (-0.007, 1.336) | (-2.274, -0.426) | (-0.775, 0.927) | (-0.768, -0.037) | (0.000, 0.145) | (-3.734, 0.930) | (0.007, 0.134) | | |
| 4 | 0.393 | 0.830 | 0.704 | -1.373 | | -0.404 | 0.073 | -1.407 | 0.070 | | |
| | (0.003, 0.783) | (0.125, 1.536) | (0.202, 1.207) | (-2.261, -0.486) | | (-0.769, -0.038) | (0.000, 0.146) | (-3.739, 0.926) | (0.007, 0.134) | | |
| 5 | 0.402 | 0.819 | 0.671 | -1.358 | | -0.392 | 0.031 | | 0.070 | | |
| | (0.013, 0.791) | (0.115, 1.523) | (0.172, 1.171) | (-2.242, -0.474) | | (-0.755, -0.029) | (0.010, 0.053) | | (0.006, 0.133) | | |

Number and proportion with further fractures

| Model | Group | Site1 | Site3 | Factors and covariates | | | | | | | Out-of-hour |
|-------|-----------------|------------------|-----------------|------------------------|------------------|----------------|-----------------|------------------|-----------------|-----------------|-------------|
| | | | | Group #Site1 | Group #Site3 | Gender | Age | Age ² | Distance | | |
| 1 | 0.303 | -0.517 | -0.173 | -0.412 | -0.662 | 0.462 | -0.035 | 0.942 | 0.006 | -0.127 | |
| | (-0.061, 0.667) | (-0.868, -0.167) | (-0.616, 0.269) | (-0.877, 0.052) | (-1.222, -0.102) | (0.240, 0.683) | (-0.076, 0.005) | (-0.247, 2.131) | (-0.030, 0.041) | (-0.331, 0.078) | |
| 2 | 0.303 | -0.517 | -0.171 | -0.412 | -0.662 | 0.462 | -0.035 | 0.942 | 0.006 | -0.127 | |
| | (-0.061, 0.667) | (-0.868, -0.167) | (-0.612, 0.271) | (-0.877, 0.053) | (-1.222, -0.102) | (0.240, 0.683) | (-0.076, 0.005) | (-0.247, 2.131) | (-0.030, 0.041) | (-0.331, 0.078) | |
| 3 | 0.307 | -0.527 | -0.200 | -0.416 | -0.666 | 0.463 | -0.035 | 0.943 | | -0.127 | |
| | (-0.056, 0.670) | (-0.872, -0.182) | (-0.603, 0.204) | (-0.880, 0.048) | (-1.226, -0.107) | (0.242, 0.684) | (-0.076, 0.005) | (-0.246, 2.131) | | (-0.331, 0.078) | |
| 4 | 0.409 | -0.426 | | -0.518 | -0.864 | 0.466 | -0.036 | 0.961 | | -0.123 | |
| | (0.104, 0.713) | (-0.711, -0.142) | | (-0.938, -0.098) | (-1.255, -0.473) | (0.244, 0.687) | (-0.076, 0.004) | (-0.227, 2.150) | | (-0.327, 0.082) | |
| 5 | 0.403 | -0.439 | | -0.513 | -0.852 | 0.468 | -0.035 | 0.933 | | | |
| | (0.099, 0.707) | (-0.723, -0.155) | | (-0.932, -0.093) | (-1.242, -0.461) | (0.246, 0.689) | (-0.076, 0.005) | (-0.256, 2.122) | | | |
| 6 | 0.391 | -0.462 | | -0.502 | -0.835 | 0.467 | -0.035 | 0.926 | | | |
| | (0.088, 0.695) | (-0.744, -0.180) | | (-0.921, -0.083) | (-1.225, -0.445) | (0.246, 0.688) | (-0.076, 0.005) | (-0.263, 2.115) | | | |
| 7 | 0.387 | -0.466 | | -0.498 | -0.832 | 0.468 | -0.005 | | | | |
| | (0.084, 0.691) | (-0.748, -0.185) | | (-0.917, -0.080) | (-1.222, -0.443) | (0.247, 0.689) | (-0.017, 0.007) | | | | |
| 8 | 0.371 | -0.494 | | -0.486 | -0.839 | 0.429 | | | | | |
| | (0.073, 0.669) | (-0.773, -0.216) | | (-0.901, -0.070) | (-1.224, -0.454) | (0.214, 0.644) | | | | | |

Days spent in hospital

| Model | Factors and covariates | | | | | | | | | |
|-------|---------------------------|------------------------------|----------------------------|---------------------------|---------------------------|---------------------------|-------------------------|------------------------------|---------------------------|---------------------------|
| | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age ² | Distance | Out-of-hour |
| 1 | 1.486 (-2.141, 5.113) | -9.757 (-12.904, -6.610) | -4.382 (-8.413, -0.352) | -1.908 (-6.129, 2.312) | -4.126 (-9.175, 0.923) | -1.325 (-3.043, 0.393) | 0.756 (0.398, 1.113) | -12.805 (-23.306, -2.304) | -0.005 (-0.307, 0.297) | -1.207 (-2.883, 0.469) |
| 2 | 1.829 (-1.797, 5.455) | -9.676 (-12.788, -6.564) | -4.492 (-8.217, -0.768) | -2.255 (-6.479, 1.969) | -4.009 (-9.035, 1.017) | -1.464 (-3.181, 0.253) | 0.746 (0.389, 1.104) | -12.689 (-23.175, -2.204) | | -1.136 (-2.813, 0.542) |
| 3 | 0.168 (-1.695, 2.031) | -10.896 (-13.009, -8.784) | -5.421 (-8.715, -2.128) | | -2.346 (-6.292, 1.599) | -1.463 (-3.180, 0.255) | 0.750 (0.393, 1.108) | -12.794 (-23.277, -2.310) | | -1.135 (-2.812, 0.543) |
| 4 | -0.355 (-1.997, 1.288) | -10.928 (-13.040, -8.816) | -6.667 (-9.209, -4.125) | | | -1.464 (-3.181, 0.254) | 0.753 (0.396, 1.111) | -12.856 (-23.339, -2.372) | | -1.130 (-2.807, 0.548) |
| 5 | -0.348 (-1.990, 1.294) | -11.011 (-13.119, -8.903) | -6.593 (-9.130, -4.057) | | | -1.426 (-3.143, 0.290) | 0.755 (0.398, 1.112) | -12.991 (-23.466, -2.516) | | |
| 6 | -0.359 (-2.001, 1.283) | -11.085 (-13.190, -8.979) | -6.349 (-8.863, -3.836) | | | -1.426 (-3.142, 0.291) | 0.757 (0.400, 1.114) | -13.074 (-23.549, -2.598) | | |
| 7 | -0.301 (-1.942, 1.340) | -11.038 (-13.143, -8.932) | -6.265 (-8.778, -3.753) | | | | 0.748 (0.391, 1.105) | -13.185 (-23.661, -2.708) | | |
| 8 | -0.291 (-1.932, 1.350) | -10.989 (-13.094, -8.884) | -6.081 (-8.584, -3.578) | | | | 0.750 (0.393, 1.107) | -13.235 (-23.713, -2.757) | | |

SF12 MCS

| Model | Factors and covariates | | | | | | | | | |
|-------|--------------------------|-------------------------|--------------------------|---------------------------|----------------------------|--------------------------|----------------------------|----------------------------|---------------------------|---------------------------|
| | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age ² | Distance | Out-of-hour |
| 1 | 3.266 (-1.761, 8.293) | 4.640 (0.279, 9.002) | 4.166 (-1.441, 9.773) | -2.696 (-8.542, 3.150) | -3.892 (-10.623, 2.839) | 0.604 (-1.723, 2.931) | -0.280 (-0.743, 0.183) | 3.457 (-11.380, 18.294) | -0.145 (-0.555, 0.265) | 0.095 (-2.187, 2.3770) |
| 2 | 3.280 (-1.730, 8.289) | 4.663 (0.331, 8.995) | 4.116 (-1.452, 9.684) | -2.713 (-8.538, 3.112) | -3.845 (-10.518, 2.828) | 0.624 (-1.694, 2.941) | -0.282 (-0.743, 0.179) | 3.537 (-11.260, 18.335) | -0.144 (-0.553, 0.264) | |
| 3 | 3.241 (-1.761, 8.244) | 4.642 (0.314, 8.969) | 4.102 (-1.461, 9.666) | -2.652 (-8.466, 3.163) | -3.775 (-10.436, 2.886) | 0.629 (-1.687, 2.944) | -0.176 (-0.310, -0.043) | | -0.142 (-0.551, 0.266) | |
| 4 | 3.180 (-1.814, 8.174) | 4.520 (0.219, 8.820) | 4.007 (-1.541, 9.555) | -2.569 (-8.371, 3.234) | -3.755 (-10.410, 2.901) | | -0.176 (-0.310, -0.042) | | -0.140 (-0.548, 0.268) | |
| 5 | 3.196 (-1.794, 8.186) | 4.471 (0.177, 8.765) | 3.956 (-1.585, 9.497) | -2.529 (-8.325, 3.267) | -3.762 (-10.413, 2.888) | | -0.176 (-0.309, -0.042) | | -0.149 (-0.555, 0.257) | |

Table E2. Continued.

| SF12 MCS | | | | | | | | | | |
|-------------------------------|-----------------------------|-----------------------------|------------------------------|------------------------------|-------------------------------|------------------------------|-------------------------------|-------------------------------|------------------------------|------------------------------|
| Factors and covariates | | | | | | | | | | |
| Model | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age² | Distance | Out-of-hour |
| 6 | 3.189 (-1.796, 8.175) | 4.401 (0.123, 8.679) | 4.123 (-1.358, 9.605) | -2.536 (-8.327, 3.255) | -3.844 (-10.479, 2.790) | | -0.176 (-0.310, -0.043) | | -0.153 (-0.559, 0.253) | |
| 7 | 3.201 (-1.783, 8.185) | 4.659 (0.443, 8.876) | 5.512 (0.551, 10.472) | -2.551 (-8.340, 3.239) | -4.700 (-11.282, 1.882) | | -0.159 (-0.292, -0.027) | | | |
| 8 | 1.313 (-1.229, 3.854) | 3.306 (0.418, 6.193) | 4.468 (0.111, 8.825) | | -2.810 (-7.801, 2.181) | | -0.157 (-0.290, -0.025) | | | |
| 9 | 0.583 (-1.604, 2.769) | 3.244 (0.358, 6.130) | 2.836 (-0.418, 6.090) | | | | -0.154 (-0.286, -0.022) | | | |
| 10 | 0.633 (-1.557, 2.823) | 1.607 (-0.589, 3.804) | | | | | -0.155 (-0.287, -0.022) | | | |
| 11 | 0.463 (-1.717, 2.643) | | | | | | -0.153 (-0.285, -0.020) | | | |
| SF12 PCS | | | | | | | | | | |
| Factors and covariates | | | | | | | | | | |
| Model | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age² | Distance | Out-of-hour |
| 1 | 1.337 (-3.212, 5.886) | 1.798 (-2.150, 5.745) | -0.326 (-5.401, 4.748) | -3.696 (-8.987, 1.595) | -2.620 (-8.711, 3.472) | -1.834 (-3.940, 0.271) | -0.385 (-0.804, 0.033) | 2.957 (-10.470, 16.383) | -0.150 (-0.520, 0.221) | -0.823 (-2.888, 1.242) |
| 2 | 1.485 (-2.438, 5.407) | 1.959 (-1.083, 5.001) | | -3.845 (-8.598, 0.909) | -2.891 (-7.275, 1.492) | -1.827 (-3.927, 0.273) | -0.386 (-0.804, 0.033) | 2.965 (-10.447, 16.377) | -0.140 (-0.480, 0.200) | -0.832 (-2.890, 1.227) |
| 3 | 1.456 (-2.461, 5.374) | 1.945 (-1.094, 4.983) | | -3.797 (-8.541, 0.947) | -2.842 (-7.216, 1.532) | -1.823 (-3.921, 0.275) | -0.297 (-0.419, -0.176) | | -0.139 (-0.478, 0.201) | -0.822 (-2.878, 1.234) |
| 4 | 1.589 (-2.331, 5.509) | 2.054 (-0.976, 5.083) | | -3.911 (-8.659, 0.837) | -2.627 (-7.000, 1.746) | -1.671 (-3.768, 0.426) | -0.295 (-0.417, -0.174) | | -0.121 (-0.461, 0.219) | |
| 5 | 1.235 (-2.556, 5.026) | 1.868 (-1.113, 4.849) | | -3.556 (-8.193, 1.080) | -2.070 (-6.031, 1.892) | -1.829 (-3.907, 0.248) | -0.288 (-0.408, -0.168) | | | |
| 6 | 1.276 (-2.513, 5.065) | 1.832 (-1.147, 4.811) | | -3.513 (-8.148, 1.122) | -2.098 (-6.058, 1.861) | -1.829 (-3.906, 0.248) | -0.287 (-0.407, -0.167) | | | |

| | | | | | |
|----|------------------------------|-----------------------------|------------------------------|------------------------------|-------------------------------|
| 7 | 0.021 (-2.937, 2.980) | 1.796 (-1.183, 4.774) | -2.266 (-6.259, 1.727) | -1.753 (-3.825, 0.319) | -0.285 (-0.405, -0.165) |
| 8 | -1.222 (-3.210, 0.765) | 0.590 (-1.498, 2.677) | | -1.823 (-3.892, 0.246) | -0.286 (-0.406, -0.166) |
| 9 | -1.288 (-3.261, 0.684) | | | -1.850 (-3.915, 0.215) | -0.285 (-0.405, -0.165) |
| 10 | -1.265 (-3.241, 0.712) | | | | -0.286 (-0.406, -0.166) |
| 11 | -1.300 (-3.282, 0.682) | | | | -0.290 (-0.411, -0.170) |

Modified Falls Efficacy Scale

| Model | Factors and covariates | | | | | | | | | |
|-------|------------------------------|-----------------------------|-----------------------------|------------------------------|------------------------------|-----------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| | Group | Site1 | Site3 | Group #Site1 | Group #Site3 | Gender | Age | Age ² | Distance | Out-hospital hours |
| 1 | 0.446 (-0.674, 1.567) | 1.190 (0.216, 2.165) | 0.762 (-0.470, 1.993) | -0.858 (-2.173, 0.458) | -0.624 (-2.125, 0.877) | 0.153 (-0.373, 0.678) | -0.071 (-0.179, 0.038) | -1.276 (-4.723, 2.172) | -0.025 (-0.117, 0.067) | -0.581 (-1.106, -0.056) |
| 2 | 0.446 (-0.673, 1.565) | 1.191 (0.218, 2.164) | 0.762 (-0.468, 1.992) | -0.857 (-2.172, 0.457) | -0.623 (-2.123, 0.876) | 0.153 (-0.372, 0.678) | -0.071 (-0.179, 0.038) | -1.276 (-4.721, 2.169) | -0.025 (-0.116, 0.067) | -0.581 (-1.106, -0.057) |
| 3 | 0.444 (-0.674, 1.562) | 1.184 (0.216, 2.152) | 0.774 (-0.445, 1.994) | -0.856 (-2.170, 0.457) | -0.628 (-2.125, 0.869) | 0.154 (-0.370, 0.678) | -0.070 (-0.179, 0.038) | -1.283 (-4.724, 2.158) | -0.025 (-0.117, 0.067) | -0.581 (-1.105, -0.057) |
| 4 | 0.441 (-0.672, 1.554) | 1.224 (0.271, 2.177) | 0.915 (-0.192, 2.022) | -0.854 (-2.162, 0.454) | -0.704 (-2.185, 0.776) | 0.150 (-0.369, 0.668) | -0.071 (-0.178, 0.037) | -1.225 (-4.624, 2.174) | -0.585 (-1.105, -0.065) | |
| 5 | 0.428 (-0.684, 1.540) | 1.206 (0.255, 2.157) | 0.906 (-0.200, 2.012) | -0.841 (-2.148, 0.466) | -0.703 (-2.183, 0.777) | | -0.070 (-0.178, 0.037) | -1.228 (-4.626, 2.169) | -0.588 (-1.108, -0.068) | |
| 6 | 0.449 (-0.661, 1.559) | 1.217 (0.267, 2.167) | 0.910 (-0.196, 2.015) | -0.867 (-2.171, 0.437) | -0.724 (-2.202, 0.755) | | -0.108 (-0.138, -0.077) | -0.589 (-1.109, -0.070) | | |
| 7 | 0.040 (-0.691, 0.771) | 0.993 (0.160, 1.826) | 0.504 (-0.228, 1.236) | -0.458 (-1.460, 0.543) | | | -0.107 (-0.137, -0.076) | -0.575 (-1.094, -0.057) | | |
| 8 | -0.204 (-0.704, 0.296) | 0.756 (0.104, 1.407) | 0.513 (-0.218, 1.244) | | | | -0.107 (-0.137, -0.076) | -0.576 (-1.095, -0.058) | | |
| 9 | -0.195 (-0.696, 0.305) | 0.465 (-0.038, 0.968) | | | | | -0.107 (-0.138, -0.076) | -0.589 (-1.107, -0.070) | | |
| 10 | -0.230 (-0.729, 0.270) | | | | | | -0.107 (-0.138, -0.077) | -0.534 (-1.051, -0.018) | | |