**Participant flow**

Analysed

(n=24)

Analysed

(n=24)

Lost to follow-up – transferred out of hospital (n=1)

Lost to follow-up – transferred out of hospital (n=1)

Allocated to standard care alone

(n=25)

Allocated to pedal exerciser and standard care

(n=25)

Excluded

* Did not meet inclusion criteria (n=255)
* Declined to participate (n=75)

Randomised

(n=50)

Assessed for eligibility

(n=380)

**Baseline characteristics**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Pedal exerciser & standard care (n=24) | Standard care alone (n=24) | p |
| Age, mean (SD) years | 87.1 (9.2) | 82.9 (5.7) | 0.07 |
| Female, n(%) | 16 (66.7%) | 13 (54.2%) | 0.38 |
| Highest EWS in preceding 24hrs |  |  |  |
| 0-1  2-3  ≥4 | 16  6  2 | 14  10  1 | 0.59 |
| Age-CCI, mean (SD) | 6.08 (1.69) | 5.58 (1.35) | 0.22 |
| MMSE, mean (SD) | 23.46 (4.85) | 22.88 (6.33) | 0.98 |
| BI, mean (SD) | 15.71 (3.93) | 16.17 (3.85) | 0.69 |
| EMS, mean (SD) | 13.79 (4.58) | 15.71 (3.95) | 0.12 |
| Days in study, mean (SD) days | 4.63 (2.16) | 5.38 (2.18) | 0.240 |
|  |  |  |  |

*\*SD, standard deviation; EWS, Early Warning Score; CCI, Charlson Comorbidity Index; MMSE, Mini-Mental State Examination; BI, Barthel Index; EMS, Elderly Mobility Scale*

**Outcome measures**

Primary outcome measures

Muscle strength

|  |  |  |  |
| --- | --- | --- | --- |
|  | Pedal exerciser & standard care (n=24) | Standard care alone (n=24) | p |
| Left knee flexion, mean (SD), kg  Baseline  Outcome | 9.6 (3.6)  9.5 (2.7) | 9.5 (3.2)  8.8 (2.9) | 0.87  0.31 |
| Right knee flexion, mean (SD), kg  Baseline  Outcome | 9.8 (3.0)  9.9 (3.2) | 9.9 (3.2)  9.3 (2.7) | 0.86  0.43 |
| Left knee extension, mean (SD), kg  Baseline  Outcome | 7.6 (2.2)  8.1 (2.4) | 7.7 (2.3)  7.7 (2.9) | 0.70  0.46 |
| Right knee extension, mean (SD), kg  Baseline  Outcome | 8.1 (2.4)  8.4 (2.4) | 8.88 (2.8)  9.0 (3.6) | 0.26  0.84 |

Secondary outcome measures

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | | Pedal exerciser & standard care (n=24) | Standard care alone (n=24) | p |
| Elderly Mobility Scale  Baseline  Outcome | 13.8 (4.6)  13.2 (5.1) | | 15.7 (4.0)  14.1 (4.0) | 0.13  0.47 |
| Time active, %  Median (IQR) | 4.5 (0.1-45.8) | | 5.0 (0.6-17.1) | - |
| Falls | 0 | | 0 | - |
| New care home admission, n (%) | 1 (4.2%) | | 1 (4.2%) | - |
|  |  | |  |  |
| Mortality |  | |  |  |
| Inpatient mortality, n (%)  30-day mortality\*, n (%) | 2 (8.3%)  2 (9.1%) | | 0 (0%)  0 (0%) | - |

*\*30-days from acute hospital discharge*

Feasibility outcomes

The median number of revolutions cycled with the pedal exerciser was 152 (IQR 421, 43.5 – 464.5) revolutions. The median time spent on the pedal exerciser was 5.08 (IQR 18.02, 2.03 – 20.05) minutes across the whole study period.

**Adverse events**

There were no adverse events associated with this trial.