Appendices

Figure 1 – Histogram of days alive at home (DAH) in the 30, 90 and 365 days after hip fracture admission
### Table 1 – Unadjusted associations of patient factors with days alive at home within 90 days of admission

| Factor                                | Absolute median difference | LCrL  | UCrL  |
|----------------------------------------|----------------------------|-------|-------|
| Age 60 to 69                           | -9.03                      | -10.20| -7.95 |
| Age 70 to 79                           | -22.21                     | -23.36| -21.19|
| Age 80 to 89                           | -46.26                     | -47.40| -45.21|
| Age 90+                                | -77.20                     | -78.49| -75.99|
| Acute hospitalization in previous year | -24.51                     | -25.41| -23.65|
| Dementia                               | -50.18                     | -50.67| -49.95|
| Frailty (mild)                         | -28.78                     | -29.38| -28.03|
| Frailty (moderate)                     | -61.90                     | -62.12| -61.57|
| Frailty (severe)                       | -61.89                     | -62.12| -61.54|
| Income quintile 2                      | 3.68                       | 2.51  | 4.85  |
| Income quintile 3                      | 4.49                       | 3.31  | 5.72  |
| Income quintile 4                      | 5.87                       | 4.71  | 7.11  |
| Income quintile 5                      | 8.10                       | 6.99  | 9.27  |
| Male                                   | -2.15                      | -3.04 | -1.24 |
| Multimorbidity                         | -15.90                     | -16.59| -15.12|
| Multimorbidity+                        | -42.47                     | -43.47| -41.40|
| Rural residence                        | 8.54                       | 7.56  | 9.51  |
Table 2 - Adjusted associations of patient factors with days alive at home within 90 days of admission

|                         | Absolute median difference | LCrl | UCrl |
|-------------------------|-----------------------------|------|------|
| Age 60 to 69            | -2.98                       | -3.78| -2.18|
| Age 70 to 79            | -14.58                      | -15.37| -13.80|
| Age 80 to 89            | -30.19                      | -30.90| -29.51|
| Age 90+                 | -41.81                      | -42.64| -40.96|
| Frailty (mild)          | -20.44                      | -21.10| -19.78|
| Frailty (moderate)      | -31.85                      | -32.72| -30.93|
| Frailty (severe)        | -32.26                      | -33.32| -31.25|
| Multimorbidity          | -2.42                       | -3.02 | -1.85 |
| Multimorbidity+         | -2.53                       | -3.25 | -1.88 |
| Acute hospitalization in previous year | -0.33                      | -0.73 | 0.03  |
| Dementia                | -19.23                      | -19.88| -18.59|
| Male                    | -0.85                       | -1.27 | -0.47 |
| Rural Residence         | 1.53                        | 0.91 | 2.19  |
| Income quintile 2       | 0.98                        | 0.45 | 1.54  |
| Income quintile 3       | 0.31                        | -0.16| 0.84  |
| Income quintile 4       | -0.01                       | -0.46| 0.43  |
| Income quintile 5       | 0.24                        | -0.25| 0.76  |
Table 3 – Markov Chain Monte Carlo diagnostics for fully adjusted model

Trace plots

| Parameter | Chain 1 | Chain 2 |
|-----------|---------|---------|
| b_intercept | ![trace plot](image) | ![trace plot](image) |
| _age_cat06M_ | ![trace plot](image) | ![trace plot](image) |
| _age_cat70M_ | ![trace plot](image) | ![trace plot](image) |
| _age_cat80M_ | ![trace plot](image) | ![trace plot](image) |
| _sexM_ | ![trace plot](image) | ![trace plot](image) |
| _ruralY_ | ![trace plot](image) | ![trace plot](image) |
| _ineq1_ | ![trace plot](image) | ![trace plot](image) |
| _ineq2_ | ![trace plot](image) | ![trace plot](image) |
| _ineq3_ | ![trace plot](image) | ![trace plot](image) |
| _ineq4_ | ![trace plot](image) | ![trace plot](image) |
| _ineq5_ | ![trace plot](image) | ![trace plot](image) |
| b_surgery | ![trace plot](image) | ![trace plot](image) |
| _res_type_isom_ | ![trace plot](image) | ![trace plot](image) |
| _my_nerve_bk_ | ![trace plot](image) | ![trace plot](image) |
| _wait_time_ | ![trace plot](image) | ![trace plot](image) |
| _anypsi_ | ![trace plot](image) | ![trace plot](image) |
| b_icu | ![trace plot](image) | ![trace plot](image) |
| _hf_injury_qui1_ | ![trace plot](image) | ![trace plot](image) |
| _hf_injury_qui2_ | ![trace plot](image) | ![trace plot](image) |
| _hf_injury_qui3_ | ![trace plot](image) | ![trace plot](image) |
| _hf_injury_qui4_ | ![trace plot](image) | ![trace plot](image) |
Autocorrelation plots

The image contains multiple autocorrelation plots for various variables. Each plot shows the autocorrelation function (ACF) of a variable over different lags. The variables are labeled with codes such as \( r_{\text{age-cat0M06}} \), \( r_{\text{age-cat70M77}} \), and so on. The y-axis represents the autocorrelation coefficient, and the x-axis represents the lag. The plots suggest varying degrees of autocorrelation at different lags for different variables.

Basis of knowledge: Autocorrelation is a statistical tool used to determine the degree of correlation between observations in a time series at different time lags. It is particularly useful in identifying patterns in the data that might be missed by simpler statistical methods.
Rhat values (optimal=1.00, which evaluates convergence of Markov Chains by comparing between- and within-chain variances for each parameter; larger values indicate non-convergence)
Table 4 – Adjusted associations of patient, admission and process factors with days alive at home within 90 days of admission

| Factor                             | Absolute median difference | LCrL | UCrL |
|------------------------------------|----------------------------|------|------|
| Age 60 to 69                        | -3.15                      | -3.95| -2.36|
| Age 70 to 79                        | -12.59                     | -13.40| -11.77|
| Age 80 to 89                        | -26.86                     | -27.65| -26.10|
| Age 90+                             | -37.92                     | -38.81| -37.04|
| Frailty (mild)                      | -16.77                     | -17.43| -16.11|
| Frailty (moderate)                  | -26.90                     | -27.81| -25.98|
| Frailty (severe)                    | -28.94                     | -30.43| -27.38|
| Multimorbidity                      | -0.98                      | -1.54 | -0.43 |
| Multimorbidity+                     | 0.29                       | -0.51 | 1.09  |
| Acute hospitalization in previous year | -1.38                     | -1.97 | -0.78 |
| Dementia                            | -19.71                     | -20.41| -19.02|
| Male                               | -1.35                      | -1.83 | -0.88 |
| Rural Residence                     | 1.04                       | 0.34  | 1.76  |
| Income quintile 2                   | 1.87                       | 1.23  | 2.49  |
| Income quintile 3                   | 0.88                       | 0.22  | 1.55  |
| Income quintile 4                   | 0.40                       | -0.27 | 1.10  |
| Income quintile 5                   | 0.97                       | 0.28  | 1.67  |
| Neuraxial anesthesia                | 1.22                       | 0.77  | 1.70  |
| Nerve block                         | -0.06                      | -0.69 | 0.56  |
| Surgical wait (1-2 days)            | -0.87                      | -1.37 | -0.36 |
| Surgical wait (3+ days)             | -6.60                      | -7.57 | -5.62 |
| Complication                        | -12.16                     | -12.74| -11.60|
| ICU Admission                       | -10.12                     | -10.96| -9.30 |
| Hospital hip fracture volume quintile 2 | -1.11                | -5.09 | 3.02  |
| Hospital hip fracture volume quintile 3 | -1.92                | -5.63 | 2.05  |
| Hospital hip fracture volume quintile 4 | -3.87                | -7.72 | 0.11  |
| Hospital hip fracture volume quintile 5 | -3.67                | -7.41 | 0.34  |
**Table 5** - Adjusted associations of patient, admission and process factors with days alive at home within 90 days of admission using non-informative prior distributions

| Factor                              | Absolute median difference | LCr | UCr |
|-------------------------------------|-----------------------------|-----|-----|
| Age 60 to 69                        | -2.92                       | -3.71 | -2.15 |
| Age 70 to 79                        | -12.30                      | -13.14 | -11.53 |
| Age 80 to 89                        | -26.52                      | -27.26 | -25.78 |
| Age 90+                             | -37.50                      | -38.35 | -36.64 |
| Frailty (mild)                      | -16.79                      | -17.44 | -16.15 |
| Frailty (moderate)                  | -26.96                      | -27.87 | -26.03 |
| Frailty (severe)                    | -28.83                      | -30.40 | -27.30 |
| Multimorbidity                      | -1.04                       | -1.61 | -0.50 |
| Multimorbidity+                     | 0.11                        | -0.75 | 0.94 |
| Acute hospitalization in previous year | -1.35                      | -1.95 | -0.76 |
| Dementia                            | -19.73                      | -20.43 | -19.03 |
| Male                                | -0.85                       | -1.27 | -0.49 |
| Rural Residence                     | 1.02                        | 0.31 | 1.72 |
| Income quintile 2                   | 1.87                        | 1.26 | 2.48 |
| Income quintile 3                   | 0.90                        | 0.25 | 1.54 |
| Income quintile 4                   | 0.45                        | -0.25 | 1.13 |
| Income quintile 5                   | 0.98                        | 0.30 | 1.64 |
| Neuraxial anesthesia                | 1.24                        | 0.78 | 1.70 |
| Nerve block                         | -0.03                       | -0.64 | 0.56 |
| Surgical wait (1-2 days)            | -0.89                       | -1.39 | -0.38 |
| Surgical wait (3+ days)             | -6.70                       | -7.67 | -5.74 |
| Complication                        | -12.19                      | -12.76 | -11.59 |
| ICU Admission                       | -10.23                      | -11.04 | -9.40 |
| Hospital hip fracture volume quintile 2 | -1.23                     | -5.31 | 2.82 |
| Hospital hip fracture volume quintile 3 | -1.99                     | -5.87 | 1.95 |
| Hospital hip fracture volume quintile 4 | -3.98                     | -7.81 | -0.04 |
| Hospital hip fracture volume quintile 5 | -3.84                     | -7.72 | 0.10 |
Table 6 - Adjusted associations of patient, admission and process factors with days alive at home within 90 days of admission where days in institution are counted as home for individuals institutionalized pre-fracture

| Factor                          | Absolute median difference | LCrL  | UCrL  |
|--------------------------------|----------------------------|-------|-------|
| Age 60 to 69                   | -3.15                      | -3.93 | -2.39 |
| Age 70 to 79                   | -9.70                      | -10.44| -8.93 |
| Age 80 to 89                   | -17.59                     | -18.32| -16.90|
| Age 90+                        | -24.24                     | -25.06| -23.42|
| Frailty (mild)                 | -1.14                      | -1.97 | -0.32 |
| Frailty (moderate)             | -2.36                      | -4.27 | -0.52 |
| Frailty (severe)               | -2.71                      | -3.21 | -2.23 |
| Multimorbidity                 | -9.26                      | -10.02| -8.51 |
| Multimorbidity+                | 8.86                       | 8.18  | 9.53  |
| Acute hospitalization in previous year | -3.64                      | -4.23 | -3.05 |
| Dementia                       | -1.44                      | -1.98 | -0.97 |
| Male                           | 1.03                       | 0.95  | 2.30  |
| Income quintile 2              | 0.62                       | 0.01  | 1.20  |
| Income quintile 3              | -0.58                      | -0.03 | 1.19  |
| Income quintile 4              | 1.52                       | 0.89  | 2.17  |
| Income quintile 5              | 1.78                       | 1.14  | 2.43  |
| Neuraxial anesthesia           | 0.99                       | 0.55  | 1.43  |
| Nerve block                    | -0.66                      | -1.22 | -0.09 |
| Surgical wait (1-2 days)       | -2.07                      | -2.56 | -1.61 |
| Surgical wait (3+ days)        | -10.07                     | -11.02| -9.12 |
| Complication                   | -20.00                     | -20.63| -19.38|
| ICU Admission                  | -16.24                     | -17.21| -15.26|
| Hospital hip fracture volume quintile 2 | -0.36                      | -3.90 | 3.24  |
| Hospital hip fracture volume quintile 3 | -2.54                      | -5.99 | 1.09  |
| Hospital hip fracture volume quintile 4 | -3.99                      | -7.49 | -0.40 |
| Hospital hip fracture volume quintile 5 | -3.92                      | -7.39 | -0.37 |
**Table 7** - Minimally important difference estimates for days alive at home within 90 days of admission using the 5% range criterion as a distribution-based input

| Group                        | Distribution estimates | Anchor estimates | Average |
|------------------------------|------------------------|------------------|--------|
|                              | SD x 0.3   | Range x 0.05  | ICU Admission | Complication |        |
| Overall                      | 11          | 4               | 10       | 12           | 9      |
| **Subgroups**                |            |                 |           |              |        |
| Males                        | 10          | 4               | 10       | 14           | 10     |
| Females                      | 11          | 4               | 10       | 11           | 9      |
| No frailty                   | 10          | 4               | 17       | 18           | 12     |
| With Frailty                 | 10          | 4               | 10       | 9            | 8      |
| Pre-fracture institutionalization | 6         | 4                | 1        | 1            | 3      |
| No pre-fracture institutionalization | 10  | 4            | 13       | 20           | 12     |
| Surgical fixation            | 11          | 4               | 16       | 14           | 11     |
| No surgical fixation         | 10          | 4               | 10       | 12           | 9      |

Frailty: frailty index >0.21; ICU: intensive care unit; SD: standard deviation
**Table 8** – Minimally important difference estimates for days alive at home within 90 days of admission where days in institution are counted as home for individuals institutionalized pre-fracture

| Distribution estimates | Anchor estimates | Average |
|-------------------------|------------------|---------|
| SD x 0.3 | Range x 0.05 | ICU Admission | Complication | |
| 10 | 9 | 16 | 20 | 14 |