**SUPPLEMENTAL TABLES**

**Table S1.** Measurements of associations by hospital outcomes

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Re-admissions** | | | | | | | | | |
| Author | Year | Adjusted for Cognition | Adjusted for Comorbidities | Functional Metric (Best-Worst) | Re-Admission Timeline | Odds Ratio (95% CI) | | | |
| Bohannon | 2004 | - | Yes | Barthel Index (20-0) | 1 year | Pre-stroke:  <20: Ref  20: 0.86 (0.76-0.97)  Postadmission:  <10: Ref  >10: 0.93 (0.89-0.97) | | | |
| Corsonello | 2012 | Yes | Yes | Short Physical Performance Battery (12-0) | 1 year | 0.92 (0.85-1.0) | | | |
| Fisher | 2016 | - | - | Katz ADL (6-0), Number of Steps | 30 day | Any difficulty with ADL: Ref  No ADL difficulty: 0.37 (0.15-0.90)  Steps:  0.90 (0.82-0.98) | | | |
| Kane | 1998 | Yes | Yes | ADL/IADL (0-100) | 1 year | - | | | |
| Narain | 1988 | Yes | Yes | Lawton ADL (7-0) | 6 month | - | | | |
| Tonkikh | 2016 | Yes | Yes | Modified Barthel Index (100-0) | 30 day | 10 point decrease in BI from admission to discharge:  1.32 (1.02-1.72) | | | |
| **Discharge Location** | | | | | | | | | |
| Author | Year | Adjusted for Cognition | Adjusted for Comorbidities | Functional Metric (Best-Worst) | Discharge Location | Odds Ratio (95% CI) | | | |
| Bohannon | 2002 | - | - | Barthel Index (20-0) | Home vs. Elsewhere | - | | | |
| Choo | 2006 | - | - | FIM (126-18) | Home vs. Elsewhere | - | | | |
| Emhoff | 1991 | - | - | FIM (126-18) | Home vs. IRF | - | | | |
| Farrell | 2006 | - | - | FIM (126-18) | Home vs. Elsewhere | - | | | |
| Fortinsky | 1999 | Yes | Yes | Change in Function Before Hospitalization, Change in Function During Hospitalization | Discharge to SNF or admission to SNF within 30 days after discharge | Stable-Stable: Ref  Decline-No improvement: 3.19 (1.46-6.96)  Stable-decline: 2.77 (1.29-5.96)  Decline-improvement: 1.46 (0.68-3.13) | | | |
| Kane | 1998 | Yes | Yes | ADL/IADL (0-100) | Home vs. Home with Assistance vs. SNF vs. IRF | - | | | |
| Mauthe | 1996 | - | - | FIM (126-18) | Home vs. SNF vs. IRF | - | | | |
| Narain | 1988 | Yes | Yes | Lawton ADL (7-0) | SNF vs. Home | - | | | |
| Roberts | 2016 | - | - | AcuteFIM transformed to FIM (126-18) | Home or Assisted Living vs. SNF/IRF | 1.06 (1.05-1.07)A | | | |
| Sood | 2011 | - | Yes | Katz ADL (0-12) | Discharge to SNF | 1.25 (1.15-1.37) | | | |
| Stein | 2015 | Yes | - | Barthel Index (100-0) | SNF/IRF vs. Home and IRF vs. SNF | Discharge to SNF/IRF vs. Home:  BI 0-20: 111.11 (5.00-250.00)  BI: 25-40: 62.50 (27.03-142.86)  BI: 45-60: 25.64 (13.70-47.62)  BI 65-80: 9.43 (5.10-15.54)  BI: 85-100: Ref  Discharge to IRF vs. SNF:  BI: 0-20: 1.72 (0.88-3.36)  BI: 25-40: 3.26 (1.45-7.30)  BI: 45-60 2.47 (1.17-5.21)  BI 65-100: Ref | | | |
| **Length of Stay** | | | | | | | | | |
| Author | Year | Adjusted for Cognition | Adjusted for Comorbidities | Functional Metric (Best-Worst) | Mean LOS (SD) | P value | Linear Regression Beta Coefficient (SE) | | P value |
| Bohannon | 2002 | - | - | Barthel Index (20-0) | - | - | - | | - |
| Choo | 2006 | - | - | FIM  (126-18) | FIM < 110:  53.5 (30.2)  FIM > 110:  20.5 (11.3) | <.001 | - | | - |
| Narain | 1988 | Yes | Yes | Lawton ADL (7-0) | ADL < 6:  29.9 (61.69)  ADL > 6:  13.2 (27.86) | <.001 | - | | - |
| Volpato | 2008 | Yes | Yes | Short Physical Performance Battery (12-0) | - | - | -0.62 (0.22) | | .005 |
| **Mortality** | | | | | | | | |  |
| Author | Year | Adjusted for Cognition | Adjusted for Comorbidities | Functional Metric (Best-Worst) | Follow-up Time | Odds Ratio (CI) | | Hazard Ratio (CI) | Relative Risk Ratio (CI) |
| Barnes | 2013 | Yes | Yes | Number of ADL Dependencies (0-5) | 1 year mortality | 1: Ref  2-4: 1.46 (0.87-2.44)  5: 3.6 (1.87-6.93) | | - | - |
| Corsonello | 2012 | Yes | Yes | Short Physical Performance Battery (12-0) | 1 year mortality | - | | 0.86 (0.78-0.95) | - |
| Covinsky | 2000 | - | Yes | Katz ADL (6-0) | 1 year mortality | 1.07 (0.99-1.16) | | - | - |
| Covinsky | 1997 | - | Yes | Number of ADL Dependencies (0-6) | Hospital and 1 year mortality | Hospital mortality  0: Ref  1-3: 2.31 (0.45-11.90)  4-5: 5.24 (1.12-24.39)  6: 13.70 (3.13-58.82)  1 year mortality  0: Ref  1-3: 1.41 (0.86-2.31)  4-5: 1.91 (1.15-3.17)  6: 4.44 (2.69-7.35) | | - | - |
| Davis | 1995 | Yes | - | Total Bathing Assistance (-) | Hospital Mortality | CVD patients:  6.69 (2.89-15.49)  PNA patients:  4.98 (2.74-9.08) | | - | - |
| Socorro Garcia | 2015 | Yes | Yes | Barthel Index (100-0) | 30 day mortality | For every 5 points decrease in BI score:  1.13 (1.03-1.25) | | - | - |
| Inouye | 1998 | Yes | Yes | Any IADL impairment | 2 year mortality | - | | - | 1.9 (1.1-3.2) |
| Justice | 1996 | - | Yes | Global ADL Stages (1-4) | Hospital mortality | - | | 1.6 (1.2-2.1)B | - |
| Matzen | 2012 | - | Yes | Barthel Index (100-0) | 3 month and 1 year survival | 3 month survival  BI 80-100: Ref  BI 50-79: 0.74 (0.55-0.99)  BI 25-49: 0.44 (0.33-0.59)  BI 0-24: 0.18 (0.14-0.24)  1 year survival  BI 80-100: Ref  BI 50-79: 0.80 (0.65-0.97)  BI 25-49: 0.55 (0.45-0.68)  BI 0-24: 0.29 (0.24-0.35) | | - | - |
| Narain | 1988 | Yes | Yes | Lawton ADL (7-0) | In hospital and 6 month mortality | - | | - | - |
| Ostir | 2013 | - | Yes | Comparing Last 24 hours to First 24 Hours of Hospitalization Number of Steps/Day: (Positive is an increase in step activity) | 2 year mortality | - | | > 820: Ref  175-819: 0.75 (0.24-2.31)  -58 to 174: 3.24 (1.27-8.30)  < -59: 4.21 (1.65-10.77) | - |
| Rozzini | 2005 | Yes | Yes | Barthel Index (100-0) | 6 month mortality | - | | - | BI Index scores 2 weeks prior to admission compared scores at admission:  No Change in BI: Ref  5-25 Decline in BI: 1.3 (0.6-3.0)  30+ Decline in BI: 2.8 (1.3-5.7) |
| Sood | 2011 | - | Yes | Katz ADL (0-12) | Hospital mortality | 1.16 (1.11-1.22) | | - | - |
| Torres | 2004 | Yes | Yes | Barthel Index (100-0) | 30 day and 1.5 year mortality | 30 day:  0.96 (0.94-0.98)  18 month:  0.97 (0.95-0.99) | | - | - |
| Valiani | 2017 | - | Yes | Braden Activity Subscale (4-1) | 6 month and 4.5 year mortality | Comparing those with impairment (BAS < 3) to those who remained mobile (BAS > 3):  6 month: 1.67 (1.40-1.96)  4.5 years (1.23 (1.08-1.39) | | - | - |
| **Physical Functional Status Post-Acute Care** | | | | | | | | | |
| Author | Year | Adjusted for Cognition | Adjusted for Comorbidities | Functional Metric (Best-Worst) | | Odds Ratio (95% CI) | | | |
| Barnes | 2013 | Yes | Yes | Number of ADL Dependencies (0-5) | | RecoveryC:  1: Ref  2-4: 0.39 (0.23-0.65)  5: 0.14 (0.06-0.31)  DependenceD:  1: Ref  2-4: 1.83 (1.06-3.14)  5: 1.44 (0.73-2.85) | | | |
| Corsonello | 2012 | Yes | Yes | Short Physical Performance Battery  (12-0) | | Functional Decline:  0.80 (0.69-0.88) | | | |
| Covinsky | 2000 | - | Yes | Katz ADL (6-0) | | - | | | |
| Fortinsky | 1999 | Yes | Yes | Change in Function Before Hospitalization, Change in Function During Hospitalization | | - | | | |
| Gabbe | 2008 | - | Yes | FIM Motor Score (91-13) | | Returning to work/study at 6 months:  1.03 (1.01-1.04) | | | |
| Zaslavsky | 2015 | Yes | Yes | Modified Barthel Index (100-0) | | Total functional recovery at 1 month:  Decline-decline: Ref  Stable-stable: 6.0 (3.3-10.9)  Stable-improvement: 3.6 (1.6-8.2)  Decline-improvement: 2.3 (1.3-4.0)  Decline-stable: 1.4 (0.5-4.1)  Stable-decline: 1.3 (0.6-2.5) | | | |

Odds ratios adjusted for age and sex unless otherwise noted. Reported odds ratios are from the original manuscripts without additional independent statistical analysis or calculations.

A: Model adjustments for covariates were not reported

B: Model did not adjust for age and sex

C: Recovery: Fully independent in all ADL at 1 year, based on number of ADL dependencies at discharge

D: Dependence: Continued dependence in at least one ADL at 1 year, based on number of ADL dependencies at discharge

**Abbreviations**

CI: Confidence Interval

SNF: Skilled Nursing Facility

IRF: Inpatient Rehabilitation Facility

CVD: Cardiovascular disease

BAS: Braden Activity Subscale

**Table S2.** Use of Barthel Index (100-0) and FIM Instrument (126-18) and their associated outcomes

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Author | Year | Population Type | Adjusted for Cognition | Adjusted for Comorbidities | Functional Metric (Best-Worst) | Outcome | Results |
| Socorro Garcia | 2015 | Elderly | Yes | Yes | Barthel Index (100-0) | 30 day mortality | For every 5 points decrease in BI score:  1.13 (1.03-1.25) |
| Matzen | 2012 | Elderly | - | Yes | Barthel Index (100-0) | 3 month and 1 year survival | 3 month survival OR  BI 80-100: Ref  BI 50-79: 0.74 (0.55-0.99)  BI 25-49: 0.44 (0.33-0.59)  BI 0-24: 0.18 (0.14-0.24)  1 year survival OR:  BI 80-100: Ref  BI 50-79: 0.80 (0.65-0.97)  BI 25-49: 0.55 (0.45-0.68)  BI 0-24: 0.29 (0.24-0.35) |
| Rozzini | 2005 | Elderly | Yes | Yes | Barthel Index (100-0) | 6 month mortality | BI Index scores 2 weeks prior to admission compared scores at admission:  No Change in BI: Ref  5-25 Decline in BI: 1.3 (0.6-3.0)  30+ Decline in BI: 2.8 (1.3-5.7) |
| Stein | 2015 | Stroke | Yes | - | Barthel Index (100-0) | SNF/IRF vs. Home and IRF vs. SNF | Discharge to SNF/IRF vs. Home:  BI 0-20: 111.11 (5.00-250.00)  BI: 25-40: 62.50 (27.03-142.86)  BI: 45-60: 25.64 (13.70-47.62)  BI 65-80: 9.43 (5.10-15.54)  BI: 85-100: Ref  Discharge to IRF vs. SNF:  BI: 0-20: 1.72 (0.88-3.36)  BI: 25-40: 3.26 (1.45-7.30)  BI: 45-60 2.47 (1.17-5.21)  BI 65-100: Ref |
| Torres | 2004 | Elderly with pneumonia | Yes | Yes | Barthel Index (100-0) | 30 day and 1.5 year mortality | 30 day OR:  0.96 (0.94-0.98)  1.5 year OR:  0.97 (0.95-0.99) |
| Choo | 2006 | Burns | - | - | FIM (126-18) | Discharge to Home vs. Elsewhere, LOS | Discharge Locations (Number of patients)  FIM < 110: IRF 14, SNF/Acute care hospital 5  FIM > 110: Home 17  P value: <0.0001  Mean LOS (SD):  FIM < 110: 53.5 (30.2)  FIM > 110: 20.5 (11.3)  P value: <.001 |
| Emhoff | 1991 | Trauma | - | - | FIM (126-18) | Discharge to Home vs. IRF | Home FIM Improvement: 50.4  IRF FIM Improvement: 21.2  P value <.001 |
| Farrell | 2006 | Burns | - | - | FIM (126-18) | Discharge Home vs. Elsewhere | FIM locomotion > 4, 94.8% Discharged home  FIM locomotion < 3, 97.9% Discharged to another setting (not home) |
| Gabbe | 2008 | Trauma | - | Yes | FIM (126-18) | Physical Functional Status Post-Acute Care | Returning to work/study at 6 months OR:  1.03 (1.01-1.04) |
| Mauthe | 1996 | Stroke | - | - | FIM (126-18) | Discharge Home vs. SNF vs. IRF | Number of patients discharged home categorized by FIM:  18-29: 1  30-49: 3  50-69: 7  70-89: 31  90-126: 36  Number of patients discharged to SNF categorized by FIM:  18-29: 43  30-49: 29  50-69: 14  70-89: 11  90-126: 1  Number of patients discharged to IRF categorized by FIM:  18-29: 15  30-49: 23  50-69: 36  70-89: 21  90-126: 8  Global p value: <.001 |

Odds ratios, hazard ratios, and relative risk adjusted for age and sex. Reported results are from the original manuscripts without additional independent statistical analysis or calculations.