Supplementary Online Content

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**eTable 1.** Reasons for Hospitalization According to Type of Severe Disability  
**eTable 2.** Reasons for Emergency Department Visits According to Type of Severe Disability  
**eTable 3.** Reasons for Restricted Activity According to Type of Severe Disability  
**eTable 4.** Sensitivity of Associations Between Precipitants and Progressive Severe Disability to the Competing Risk of Death  
**eTable 5.** Sensitivity of Associations Between Precipitants and Catastrophic Severe Disability to the Competing Risk of Death

This supplementary material has been provided by the authors to give readers additional information about their work.
**eTable 1. Reasons for Hospitalization According to Type of Severe Disability**

| Reasons for Hospitalization | Not Severe Disability (n=1400) | Progressive Severe Disability (n=172) | Catastrophic Severe Disability (n=395) |
|-----------------------------|-------------------------------|--------------------------------------|--------------------------------------|
|                              | n (%)                        | n (%)                                | n (%)                                |
| Cardiac                     | 342 (24.5)                   | 27 (15.6)                            | 60 (15.2)                            |
| Infection                   | 175 (12.5)                   | 35 (20.2)                            | 67 (17.0)                            |
| Stroke                      | 64 (4.6)                     | 3 (1.7)                              | 26 (6.6)                             |
| Arthritis                   | 63 (4.5)                     | 7 (4.1)                              | 25 (6.3)                             |
| Fall-related injury         | 54 (3.9)                     | 12 (7.0)                             | 52 (13.2)                            |
| Cancer                      | 47 (3.4)                     | 8 (4.7)                              | 31 (7.9)                             |
| Gastrointestinal tract bleeding | 40 (2.9)                   | 3 (1.7)                              | 11 (2.8)                             |
| Other                       |                               |                                      |                                      |
| Medical                     | 423 (30.2)                   | 59 (34.1)                            | 95 (24.1)                            |
| Surgical                    | 168 (12.0)                   | 10 (5.8)                             | 23 (5.8)                             |
| Other                       | 15 (1.1)                     | 6 (3.5)                              | 4 (1.0)                              |

Abbreviations: SD, standard deviation

*a* The number of hospitalizations are provided for each of the three disability groups. These hospitalizations were identified from 472 (not severe disability), 97 (progressive severe disability), and 257 (catastrophic severe disability) participants. Reasons are missing for 9 (0.6%), 2 (1.2%), and 1 (0.3%) hospitalizations in the not severe, progressive severe, and catastrophic severe disability groups, respectively.

*b* Grouped into distinct diagnostic categories, as described in the “Methods” section, and presented in order of highest to lowest rates in the not severe disability group.

*c* For each calculation, the numerator includes the number of admissions during the follow-up period for the specific reason, while the denominator includes the number of admissions for all reasons combined.

*d* Includes psychiatric admissions and responses that could not otherwise be categorized.
**eTable 2.** Reasons for Emergency Department Visits According to Type of Severe Disability

| Reasons for Emergency Department Visits | Not Severe Disability (n=1005) | Progressive Severe Disability (n=74) | Catastrophic Severe Disability (n=89) |
|----------------------------------------|-------------------------------|-------------------------------------|-------------------------------------|
| Musculoskeletal                        | 279 (27.8)                    | 28 (37.8)                           | 24 (27.0)                           |
| Cardiac                                | 105 (10.5)                    | 10 (13.5)                           | 2 (2.3)                             |
| Gastrointestinal                       | 94 (9.4)                      | 3 (4.1)                             | 8 (9.0)                             |
| Infection                              | 86 (8.6)                      | 3 (4.1)                             | 3 (3.4)                             |
| Head and neck                          | 54 (5.4)                      | 2 (2.7)                             | 6 (6.7)                             |
| Falls/mobility problems                | 48 (4.8)                      | 11 (14.9)                           | 11 (12.4)                           |
| Renal/genitourinary                    | 47 (4.7)                      | 2 (2.7)                             | 2 (2.3)                             |
| Pulmonary                              | 33 (3.3)                      | 4 (5.4)                             | 2 (2.3)                             |
| Neurologic                             | 30 (3.0)                      | 3 (4.1)                             | 3 (3.4)                             |
| Dermatologic                           | 28 (2.8)                      | 0                                  | 5 (5.6)                             |
| Toxic/environmental                   | 6 (0.6)                       | 0                                  | 0                                   |
| Psychiatric                            | 5 (0.5)                       | 1 (1.4)                             | 0                                   |
| Other medical                          | 156 (15.5)                    | 6 (8.1)                             | 18 (20.2)                           |

**Abbreviations:** SD, standard deviation

*The number of emergency department visits that did not lead to hospitalization are provided for each of the three disability groups. These visits were identified from 371 (not severe disability), 43 (progressive severe disability), and 72 (catastrophic severe disability) participants. Reasons are missing for 34 (3.4%), 1 (1.4%), and 5 (5.6%) emergency department visits in the not severe, progressive severe, and catastrophic severe disability groups, respectively.*

*Grouped into distinct diagnostic categories, as described in the “Methods” section, and presented in order of highest to lowest rates in the not severe disability group.*

*For each calculation, the numerator includes the number of emergency department visits during the follow-up period for the specific reason, while the denominator includes the number of emergency department visits for all reasons combined.*

*Includes unclassifiable complaints such as feeling “weak,” “tired,” or generally unwell, with no other specifying features.*

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### eTable 3. Reasons for Restricted Activity According to Type of Severe Disability

| Reason for Restricted Activity b | Not Severe Disability (n=6205) | Progressive Severe Disability (n=185) | Catastrophic Severe Disability (n=460) |
|----------------------------------|---------------------------------|--------------------------------------|--------------------------------------|
| episodes (SD) per 100 person-months c |                                 |                                      |                                      |
| Been fatigued (no energy/very tired) | 61.3 (0.5)                     | 72.8 (0.4)                            | 71.0 (0.5)                           |
| Pain or stiffness in joints       | 38.8 (0.5)                     | 46.2 (0.5)                            | 49.0 (0.5)                           |
| Pain or stiffness in back         | 30.9 (0.5)                     | 44.0 (0.5)                            | 41.7 (0.5)                           |
| Been dizzy or unsteady on feet    | 27.0 (0.4)                     | 45.1 (0.5)                            | 34.9 (0.5)                           |
| Cold or flu symptoms              | 25.3 (0.4)                     | 19.0 (0.4)                            | 19.6 (0.4)                           |
| Leg pain on walking               | 21.1 (0.4)                     | 28.3 (0.5)                            | 25.1 (0.4)                           |
| Been afraid of falling            | 20.5 (0.4)                     | 31.0 (0.5)                            | 27.1 (0.4)                           |
| Nausea, vomiting, diarrhea, or other stomach problem | 19.2 (0.4)                     | 27.2 (0.4)                            | 15.9 (0.4)                           |
| Difficulty breathing or shortness of breath | 18.6 (0.4)                     | 30.4 (0.5)                            | 25.7 (0.4)                           |
| Difficulty with sleeping          | 17.9 (0.4)                     | 32.6 (0.5)                            | 20.6 (0.4)                           |
| Been depressed                    | 15.1 (0.4)                     | 29.5 (0.5)                            | 21.1 (0.4)                           |
| Swelling in feet or ankles        | 12.4 (0.3)                     | 21.2 (0.4)                            | 19.0 (0.4)                           |
| Been anxious or worried           | 12.0 (0.3)                     | 24.6 (0.4)                            | 19.9 (0.4)                           |
| Weakness of arms or legs          | 11.9 (0.3)                     | 25.0 (0.4)                            | 18.1 (0.4)                           |
| Poor or decreased vision          | 8.8 (0.3)                      | 10.4 (0.3)                            | 12.9 (0.3)                           |
| Change in medications             | 8.2 (0.3)                      | 17.1 (0.4)                            | 8.9 (0.3)                            |
| Fall or injury                    | 7.6 (0.3)                      | 10.9 (0.4)                            | 8.7 (0.3)                            |
| Chest pain or tightness           | 7.0 (0.3)                      | 11.4 (0.3)                            | 8.7 (0.3)                            |
| Lost control of urine and wet self | 6.3 (0.2)                      | 10.4 (0.3)                            | 6.5 (0.3)                            |
| Frequent or painful urination     | 5.6 (0.2)                      | 12.0 (0.3)                            | 7.8 (0.3)                            |
| Family member or friend became    | 4.2 (0.2)                      | 2.7 (0.2)                             | 5.2 (0.2)                            |
| seriously ill or had an accident  |                                 |                                      |                                      |
| Problem with memory or difficulty thinking | 4.0 (0.2)                      | 7.1 (0.3)                             | 10.9 (0.3)                           |
| Experienced the death or loss of a family member or friend | 3.4 (0.2)                      | 2.7 (0.2)                             | 3.3 (0.2)                            |
| Problem with alcohol              | 0                               | 0                                     | 0                                     |

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| Other reason | 24.8 (0.4) | 23.4 (0.4) | 24.2 (0.4) |
|--------------|------------|------------|------------|

Abbreviations: SD, standard deviation

aThe number of episodes with restricted activity are provided for each of the three disability groups. These episodes were identified from 634 (not severe disability), 75 (progressive severe disability), and 151 (catastrophic severe disability) participants.

bPresented in order of highest to lowest rates in the not severe disability group.

cFor each calculation, the numerator includes the number of restricted activity episodes during the follow-up period for the specific reason, while the denominator includes the number of restricted activity episodes for all reasons combined. Because participants could provide more than 1 reason for their restricted activity, the percentages for each type of severe disability do not sum to 100.
**eTable 4. Sensitivity of Associations between Precipitants and Progressive Severe Disability to the Competing Risk of Death**

| Imputation Approach                                                                 | Hospitalization | Emergency Department Visit | Restricted Activity |
|-------------------------------------------------------------------------------------|-----------------|----------------------------|---------------------|
| Not imputed (reported results)                                                      | 48.3 (31.0–75.4) | 9.6 (4.5–20.6)             | 3.2 (1.7–6.0)       |
| Missing at random, censor after progressive disability **c**                        | 33.7 (22.5–50.3) | 8.5 (4.4–16.2)             | 2.7 (1.5–4.8)       |
| Not missing at random, progressive disability in no months **d**                    | 35.9 (22.9–56.3) | 8.5 (3.9–18.4)             | 3.1 (1.7–5.9)       |
| Not missing at random, progressive disability in last month **e**                   | 14.7 (11.0–19.8) | 4.3 (2.5–7.3)              | 2.8 (2.0–4.1)       |

**Abbreviations:** CI, confidence interval

**a** Follow-up was truncated by death in 113 (3.2%) of the 3550 person-intervals.

**b** Calculated using pooled logistic regression with a complementary log-log link and generalized estimating equations with robust standard errors based on an autoregressive correlation structure, as described in the Methods. The models included the same set of factors as in Figure 1.

**c** The occurrence of progressive severe disability was imputed for each month from the time of death through the end of the person-interval, with censoring at the first occurrence of the outcome for all 113 decedents.

**d** Assumes that none of the 113 decedents experienced progressive severe disability from the time of death through the end of the person-interval.

**e** Assumes that all of the 113 decedents experienced progressive severe disability only in the last month of the person-interval that was truncated by death.
**eTable 5.** Sensitivity of Associations between Precipitants and Catastrophic Severe Disability to the Competing Risk of Death \(^a\)

| Imputation Approach                                                                 | Hospitalization | Emergency Department Visit | Restricted Activity |
|-------------------------------------------------------------------------------------|-----------------|---------------------------|---------------------|
| Not imputed (reported results)                                                      | 321.0 (194.0–531.0) | 32.8 (16.4–65.3)          | 10.7 (5.8–19.6)     |
| Missing at random, censor after progressive disability \(^c\)                       | 206.8 (135.2–316.4) | 23.2 (12.9–41.8)          | 6.8 (3.6–12.7)      |
| Not missing at random, progressive disability in no months \(^d\)                   | 294.2 (184.6–468.7) | 31.6 (16.5–60.5)          | 10.5 (6.0–18.4)     |
| Not missing at random, progressive disability in last month \(^e\)                  | 71.2 (55.2–91.9)  | 9.1 (5.8–14.2)            | 4.6 (3.3–6.3)       |

Abbreviations: CI, confidence interval

\(^a\)Follow-up was truncated by death in 113 (3.2%) of the 3550 person-intervals.

\(^b\)Calculated using pooled logistic regression with a complementary log-log link and generalized estimating equations with robust standard errors based on an autoregressive correlation structure, as described in the Methods. The models included the same set of factors as in Figure 1.

\(^c\)The occurrence of progressive severe disability was imputed for each month from the time of death through the end of the person-interval, with censoring at the first occurrence of the outcome for all 113 decedents.

\(^d\)Assumes that none of the 113 decedents experienced progressive severe disability from the time of death through the end of the person-interval.

\(^e\)Assumes that all of the 113 decedents experienced catastrophic severe disability only in the last month of the person-interval that was truncated by death.