Supplementary Online Content


- **eFigure.** Flowchart of follow-up visits
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- **eTable 2.** Sensitivity analysis of the risk of incident dementia by hospitalization status, adjusted for additional possible confounders compared with primary models

This supplementary material has been provided by the authors to give readers additional information about their work.
eFigure. Flowchart of follow-up visits

Follow-Up Visit 1, n=2929
Cases: 90
Died: 216, Withdrew: 109, brain injury: 21
Not yet seen for next visit: 325

Follow-Up Visit 2, n=2177
Cases: 73
Died: 190, Withdrew: 74, brain injury: 20
Not yet seen for next visit: 260

Follow-Up Visit 3, n=1560
Cases: 100
Died: 121, Withdrew: 59, brain injury: 16
Not yet seen for next visit: 48

Follow-Up Visit 4, n=1216
Cases: 75
Not yet seen for next visit: 97

Follow-Up Visit 5, n=868
Cases: 40
Died: 134, Withdrew: 19, brain injury: 1
Not yet seen for next visit: 671

Follow-Up Visit 6, n=3
Cases: 1
Died: 1, Withdrew: 0, brain injury: 0
Not yet seen for next visit: 2
**eTable 1. Sensitivity analyses of the difference in follow-up cognitive scores by hospitalization status, adjusted for additional possible confounders compared with primary models**

<table>
<thead>
<tr>
<th>Visit Status</th>
<th>Not following hospitalization</th>
<th>Following non-critical illness hospitalization</th>
<th>Following critical illness hospitalization</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRIMARY MODEL: Adjusted[^f] difference in follow-up CASI (95% CI, p-value)</td>
<td>Referent</td>
<td>-0.85 (-1.13 to -0.56, p&lt;0.001)</td>
<td>-1.39 (-2.72 to -0.07, p=0.04)</td>
</tr>
<tr>
<td>SENSITIVITY ANALYSIS[^f]: Adjusted difference in follow-up CASI</td>
<td>Referent</td>
<td>-0.86 (-1.13 to -0.57, p&lt;0.001)</td>
<td>-1.37 (-2.68 to -0.06, p=0.040)</td>
</tr>
</tbody>
</table>

\[^f\] Linear regression with GEE to account for repeated observations, specifying an exchangeable correlation matrix and robust variance estimates; note that these analyses include 49 fewer individuals and 212 fewer observations than analyses in Table 3, because of missing data.

\[^g\] Adjusted for age at study visit, sex, baseline cognitive score, years of education, time since baseline visit, and the baseline comorbidities CHD and CVD.

\[^h\] Adjusted for the above covariates plus race/ethnicity, smoking status, and additional baseline comorbidities.

**eTable 2. Sensitivity analysis of the risk of incident dementia by hospitalization status, adjusted for additional possible confounders compared with primary models**

<table>
<thead>
<tr>
<th>Hospitalization Status</th>
<th>No hospitalizations during study (n=1601)</th>
<th>One or more non-critical hospitalizations (n=1287)</th>
<th>One or more critical illness hospitalizations (n=41)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRIMARY MODEL: Adjusted risk of incident dementia, hazard ratio (95% CI, p-value)</td>
<td>Referent</td>
<td>1.4 (1.1 to 1.8, P=0.002)</td>
<td>2.0 (0.7 to 6.0, p=0.204)</td>
</tr>
<tr>
<td>SENSITIVITY MODEL: Adjusted risk of incident dementia, hazard ratio (95% CI, p-value)</td>
<td>Referent</td>
<td>1.3 (1.1 to 1.7, p=0.005)</td>
<td>1.9 (0.7 to 5.7, p=0.234)</td>
</tr>
</tbody>
</table>

\[^g\] Cox proportional hazards regression, with age as the time axis, left-truncated at age at study entry; note that these analyses include 49 fewer individuals and 212 fewer observations than analyses in Table 5, because of missing data.

\[^h\] Hazard ratios after adjusting for age at study entry, sex, baseline CASI IRT score, years of education, and baseline comorbidities of CHD and CVD, with the latter included as a time varying covariate.

\[^i\] Adjusted for the above covariates plus race/ethnicity, smoking status, and additional baseline comorbidities.

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