**Supplementary material**

**Supplementary Table 1: Results of the nursing home admission model excluding individuals with dementia or hip fractures**

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| --- | --- | --- | --- |
|   | **PD status only** | **Adding demographics** | **Adding activities** |
|  | **OR****(95%CI)** | **OR****(95%CI)** | **OR****(95%CI)** |
| **Demographicsa** | N | Y | Y |
| **PD, non-advanced** | 2.30\*\*\* (1.55-3.43) | 1.94\*\*\*(1.23-3.06) | 1.43(0.86-2.37) |
| **APD** | 8.17\*\*\* (5.38-12.39) | 5.09\*\*\*(2.92-8.89) | 1.63(0.89-2.99) |
| **Difficulty with:b** |  |  |  |  |  |
| Walking |  |  |  | 1.73\*\*\*(1.43-2.08) |
| Dressing |  |  |  | 1.08(0.87-1.34) |
| Going to the toilet |  |  |  | 1.32\*\*(1.05-1.65) |
| Getting out of bed/chair |  |  |  | 1.24\*\*(1.02-1.51) |
| Using a phone |  |  |  | 1.00(0.80-1.24) |
| Paying bills |  |  |  | 2.59\*\*\*(2.05-3.27) |
| Light housework |  |  |  | 1.51\*\*\*(1.22-1.86) |
| Heavy housework |  |  |  | 1.49\*\*\*(1.23-1.81) |

Notes: aIncluded demographics are indicators for male, non-Hispanic black, Hispanic, high school graduate, college graduate or more, current smoker, widow. In addition, age is included as a covariate.

bHaving difficulty with a certain activity is a yes/no question.

Statistically significant at \*\*\*p<0.01; \*\*p<0.05; \*p<0.1.

Abbreviations are: APD = advanced Parkinson’s disease, PD = Parkinson’s disease, OR = Odds ratio, CI = Confidence interval

**Supplementary Table 2. Risk of nursing home admission in individuals with advanced Parkinson’s disease and Parkinson’s disease, excluding those with dementia and hip fractures, in the Medicare Current Beneficiary Survey**

|  |  |  |  |
| --- | --- | --- | --- |
| Disease status | Absolute NHA risk (%) | Risk relative to non-PD  | Risk relative to non-advanced PD |
| Non-PD | 0.9% | -- | -- |
| Non-advanced PD | 2.2% | 2.4 | -- |
| APD | 5.9% | 9.3 | 2.7 |

Notes: Abbreviations are: APD = advanced Parkinson’s disease, NHA = nursing home admission, PD = Parkinson’s disease.

**Supplementary Fig 1: The effect of levodopa-carbidopa intestinal gel on nursing home admission risk under different treatment scenarios in the advanced Parkinson’s disease population, excluding individuals with dementia and hip fractures**

Notes: The baseline scenario applies to patients with APD on standard of care (optimized oral levodopa-carbidopa IR). The other scenarios apply to patients with APD on levodopa-carbidopa intestinal gel. Abbreviations are: APD = advanced Parkinson’s disease, NHA = nursing home admission.

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