**eTable1. Summary of self-care behaviors and disability outcomes by study visit (NHATS 2011 – 2016)a**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Variable | Visit 1n = 7,609 | Visit 2n = 6,469 | Visit 3 n = 5,364 | Visit 4n = 4,443 | Visit 5n = 3,953 | Visit 6n = 3,531 |
| Physical activity (walk, vigorous activities) |  |  |  |  |  |  |
| Neither EitherBoth | 30.5%39.0%30.6% | 30.0%38.4%31.6% | 29.3%40.4%30.4% | 31.2%39.0%29.8% | 31.5%37.7%30.8% | 30.8%39.3%29.9% |
| Sleep quality |  |  |  |  |  |  |
| no insomniadifficulty initiating sleep onlydifficulty maintaining sleep onlyboth insomnia symptoms | 72.9%11.5%5.5%10.1% | 75.2%10.6%4.6%9.5% | 75.5%10.8%5.6%8.1% | 76.5%10.6%4.8%8.0% | 76.4%11.2%4.3%8.1% | 75.8%10.8%5.2%8.2% |
| Financial stability (0-4) | 2.94 (0.01) | 2.99 (0.01) | 3.00 (0.01) | 3.05 (0.02) | 3.02 (0.02) | 3.04 (0.02) |
| Healthy relationships |  |  |  |  |  |  |
| no visit, no restrictionno visit, with restrictionvisit, with restrictionvisit, no restriction | 10.0%2.5%6.6%80.9% | 8.5%2.2%6.5%82.7% | 9.1%2.3%6.6%82.0% | 9.6%3.0%5.7%81.6% | 11.3%2.5%6.4%79.7% | 11.7%2.5%5.8%80.0% |
| Community engagement (0-8) | 4.22 (0.03) | 4.32 (0.03) | 4.33 (0.04) | 4.38 (0.04) | 4.38 (0.04) | 4.40 (0.05) |
| Medication management |  |  |  |  |  |  |
| Self-manage, no difficulty/no medsSelf-manage, difficultyOthers manage | 85.9%7.1%7.0% | 85.7%6.5%7.8% | 84.6%7.7%7.7% | 84.7%8.0%7.3% | 83.4%9.0%7.6% | 84.0%9.0%7.6% |
| Non-physical activities |  |  |  |  |  |  |
| Yes | 35.6% | 34.7% | 33.6% | 32.2% | 30.5% | 30.8% |
| Email/text and internet |  |  |  |  |  |  |
| Both email/text and internetEither email/text or internetNeither | 36.5%17.6%45.9% | 38.1%18.9%43.0% | 38.9%20.0%41.1% | 40.2%20.1%39.7% | 40.9%20.7%38.4% | 42.2%20.0%37.7% |
| Mobility disability |  |  |  |  |  |  |
| Fully ableAccommodate/reduced frequencyDifficultyNeed assistance | 66.8%14.9%4.8%13.4% | 66.7%12.3%4.7%16.4% | 64.6%12.8%4.6%18.0% | 61.3%14.4%5.0%19.3% | 60.7%15.6%5.7%18.0% | 59.6%15.0%5.9%19.5% |
| Activities of daily living (ADLs) disability |  |  |  |  |  |  |
| Fully ableAccommodate/reduced frequencyDifficultyNeed assistance | 42.5%39.7%4.7%13.1% | 38.9%40.5%3.9%16.7% | 35.8%41.8%3.9%18.5% | 32.2%43.0%4.9%19.9% | 29.8%45.5%4.8%19.9% | 27.3%46.7%5.2%20.9% |

aweighted percentages to ensure population representation

**eTable2a. Summary of self-care behaviors and disability outcomes within the “unfavorable group” by study visit (NHATS 2011 – 2016)a**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Variable | Visit 1n = 4,128 | Visit 2n = 3,480 | Visit 3 n = 2,776 | Visit 4n = 2,185 | Visit 5n = 1,868 | Visit 6n = 1,628 |
| Physical activity (walk, vigorous activities) |  |  |  |  |  |  |
| Neither EitherBoth | 55.9%39.4%4.8% | 48.7%40.4%10.9% | 47.1%40.6%12.3% | 51.1%39.3%9.6% | 50.7%36.9%12.4% | 50.8%38.1%11.1% |
| Sleep quality |  |  |  |  |  |  |
| no insomniadifficulty initiating sleep onlydifficulty maintaining sleep onlyboth insomnia symptoms | 60.0%15.9%6.8%17.3% | 66.1%13.5%5.5%14.9% | 66.4%14.2%6.0%13.4% | 67.3%13.4%5.2%14.1% | 66.8%14.0%4.3%14.9% | 66.4%13.7%5.5%14.4% |
| Financial stability (0-4) | 2.66 (0.02) | 2.73 (0.02) | 2.73 (0.02) | 2.77 (0.02) | 2.77 (0.02) | 2.76 (0.03) |
| Healthy relationships |  |  |  |  |  |  |
| no visit, no restrictionno visit, with restrictionvisit, with restrictionvisit, no restriction | 18.4%5.3%12.7%63.6% | 13.8%4.3%10.3%71.6% | 14.5%4.8%10.0%70.9% | 15.7%5.8%8.0%70.5% | 19.1%4.8%9.0%67.1% | 19.5%4.6%8.8%67.1% |
| Community engagement (0-8) | 3.09 (0.03) | 3.28 (0.04) | 3.33 (0.05) | 3.33 (0.05) | 3.31 (0.06) | 3.30 (0.06) |
| Medication management |  |  |  |  |  |  |
| Self-manage, no difficulty/no medsSelf-manage, difficultyOthers manage | 76.9%8.2%14.8% | 77.6%6.8%15.6% | 76.1%8.4%15.5% | 77.7%7.8%14.5% | 76.0%9.5%14.5% | 77.0%9.2%13.8% |
| Non-physical activities |  |  |  |  |  |  |
| Yes | 47.9% | 47.6% | 46.5% | 44.4% | 41.7% | 43.9% |
| Email/text and internet |  |  |  |  |  |  |
| Both email/text and internetEither email/text or internetNeither | 8.9%15.9%75.2% | 12.0%16.5%71.6% | 12.2%19.7%68.2% | 12.0%19.0%69.0% | 12.1%21.6%66.3% | 12.4%21.4%66.1% |
| Mobility disability |  |  |  |  |  |  |
| Fully ableAccommodate/reduced frequencyDifficultyNeed assistance | 47.8%19.4%7.8%25.0% | 48.6%15.8%7.2%28.4% | 45.6%17.0%7.0%30.4% | 42.5%17.4%6.6%33.5% | 42.2%18.9%8.1%30.9% | 41.4%18.3%8.6%31.6% |
| Activities of daily living (ADLs) disability |  |  |  |  |  |  |
| Fully ableAccommodate/reduced frequencyDifficultyNeed assistance | 34.0%36.6%6.6%22.7% | 29.5%36.5%5.3%28.7% | 25.5%37.5%5.4%31.6% | 22.9%38.2%5.7%33.2% | 21.5%40.1%6.1%32.3% | 20.6%39.5%6.7%33.2% |

aweighted percentages to ensure population representation

**eTable2b. Summary of self-care behaviors and disability outcomes within the “favorable group” by study visit (NHATS 2011 – 2016)a**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Variable | Visit 1n = 3,481 | Visit 2n = 2,989 | Visit 3 n = 2,588 | Visit 4n = 2,258 | Visit 5n = 2,085 | Visit 6n = 1,903 |
| Physical activity (walk, vigorous activities) |  |  |  |  |  |  |
| Neither EitherBoth | 7.7%38.6%53.8% | 15.0%36.7%48.3% | 16.1%40.2%43.7% | 17.7%38.8%43.4% | 19.1%38.2%42.8% | 18.6%40.0%41.4% |
| Sleep quality |  |  |  |  |  |  |
| no insomniadifficulty initiating sleep onlydifficulty maintaining sleep onlyboth insomnia symptoms | 84.5%7.5%4.3%3.7% | 82.5%8.3%3.9%5.2% | 82.1%8.4%5.3%4.2% | 82.7%8.8%4.5%4.0% | 82.5%9.4%4.3%3.7% | 81.5%9.0%5.1%4.4% |
| Financial stability (0-4) | 3.19 (0.01) | 3.20 (0.02) | 3.20 (0.02) | 3.24 (0.02) | 3.18 (0.02) | 3.22 (0.02) |
| Healthy relationships |  |  |  |  |  |  |
| no visit, no restrictionno visit, with restrictionvisit, with restrictionvisit, no restriction | 2.5%0.0%1.0%96.4% | 4.3%0.5%3.5%91.7% | 5.1%0.5%4.2%90.2% | 5.5%1.2%4.1%89.2% | 6.3%1.0%4.8%87.9% | 6.9%1.2%4.0%88.0% |
| Community engagement (0-8) | 5.23 (0.04) | 5.16 (0.04) | 5.06 (0.05) | 5.10 (0.05) | 5.06 (0.05) | 5.06 (0.06) |
| Medication management |  |  |  |  |  |  |
| Self-manage, no difficulty/no medsSelf-manage, difficultyOthers manage | 93.9%6.1%0.0% | 92.1%6.3%1.6% | 90.8%7.3%2.0% | 89.5%8.1%2.4% | 88.3%8.6%3.1% | 88.2%8.4%3.4% |
| Non-physical activities |  |  |  |  |  |  |
| Yes | 24.6% | 24.2% | 24.0% | 23.8% | 23.2% | 22.9% |
| Email/text and internet |  |  |  |  |  |  |
| Both email/text and internetEither email/text or internetNeither | 57.1%18.9%24.0% | 55.4%20.4%24.2% | 54.8%20.2%25.0% | 55.8%20.8%23.5% | 56.3%20.3%23.4% | 57.5%19.3%23.2% |
| Mobility disability |  |  |  |  |  |  |
| Fully ableAccommodate/reduced frequencyDifficultyNeed assistance | 83.9%10.9%2.2%3.1% | 82.0%9.3%2.5%6.2% | 79.3%9.6%2.7%8.4% | 74.8%12.2%3.9%9.1% | 73.3%13.4%4.1%9.2% | 71.3%12.8%4.2%11.7% |
| Activities of daily living (ADLs) disability |  |  |  |  |  |  |
| Fully ableAccommodate/reduced frequencyDifficultyNeed assistance | 50.1%42.5%2.9%4.5% | 47.0%43.9%2.7%6.4% | 44.0%45.1%2.7%8.2% | 38.9%46.5%4.4%10.3% | 35.4%49.1%4.0%11.5% | 31.5%51.3%4.2%12.9% |

aweighted percentages to ensure population representation

**eTable3. Selecting number of classes in latent class analysis.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Outcome** | **Number of Classes** | **AIC** | **BIC** | **n-adjusted BIC** | **LMR-LRT** | **Entropy** |
| Self-care behaviors at baseline | 2 | 117492 | 117721 | 117616 | P<0.01 | 0.580 |
| 3 | 117121 | 117461 | 117305 | P=0.440 | 0.520 |
| Mobility disability over time | 2 | 51623 | 51879 | 51762 | P<0.01 | 0.810 |
| 3 | 49259 | 49648 | 49470 | P<0.01 | 0.773 |
| 4 | 48507 | 49027 | 48789 | P=0.822 | 0.726 |
| Activities of daily living (ADLs) disability over time | 2 | 63032 | 63288 | 63171 | P<0.01 | 0.784 |
| 3 | 57305 | 57693 | 57515 | P<0.01 | 0.775 |
| 4 | 56538 | 57058 | 56820 | P=0.779 | 0.726 |

AIC: Akaike information criterion; BIC: Bayesian information criterion; LMR-LRT: Lo-Mendell-Rubin adjusted likelihood ratio test

**eTable4. Prevalence of positive response to each response category by latent trajectory profile: Results from 3-class latent class model (Class 1: maintaining independence over time; Class 2: shifting to accommodation or difficulty; Class 3: shifting to assistance).**

|  |  |  |
| --- | --- | --- |
| **Prevalence (%)** | **Mobility** | **Activities of daily living (ADLs)** |
|  | Class 1 | Class 2 | Class 3 | Class 1 | Class 2 | Class 3 |
| Visit 1 |  |  |  |  |  |  |
| Fully able | 92.0% | 43.1% | 10.6% | 85.9% | 18.0% | 11.7% |
| Accommodate/reduced frequency | 5.9% | 40.0% | 15.0% | 12.5% | 72.1% | 26.5% |
| Difficulty | 0.5% | 10.6% | 12.7% | 0.3% | 6.5% | 9.0% |
| Need assistance | 1.6% | 6.3% | 61.7% | 1.3% | 3.4% | 52.7% |
| Visit 2 |  |  |  |  |  |  |
| Fully able | 94.4% | 39.3% | 5.4% | 86.9% | 11.4% | 7.3% |
| Accommodate/reduced frequency | 3.3% | 39.3% | 10.0% | 11.5% | 78.6% | 18.3% |
| Difficulty | 0.6% | 12.4% | 8.9% | 0.3% | 6.3% | 5.8% |
| Need assistance | 1.7% | 9.0% | 75.7% | 1.3% | 3.8% | 68.7% |
| Visit 3 |  |  |  |  |  |  |
| Fully able | 93.1% | 29.4% | 1.8% | 83.1% | 7.8% | 4.5% |
| Accommodate/reduced frequency | 3.8% | 42.3% | 6.7% | 13.7% | 80.8% | 10.4% |
| Difficulty | 0.3% | 14.3% | 7.7% | 0.5% | 6.5% | 4.8% |
| Need assistance | 2.8% | 14.1% | 83.8% | 2.7% | 4.9% | 80.2% |
| Visit 4 |  |  |  |  |  |  |
| Fully able | 91.1% | 13.3% | 2.4% | 75.4% | 6.4% | 1.0% |
| Accommodate/reduced frequency | 5.2% | 48.1% | 2.1% | 18.8% | 79.0% | 4.6% |
| Difficulty | 0.6% | 17.1% | 6.0% | 1.5% | 8.0% | 4.9% |
| Need assistance | 3.1% | 21.6% | 89.5% | 4.4% | 6.6% | 89.5% |
| Visit 5 |  |  |  |  |  |  |
| Fully able | 88.3% | 10.1% | 1.7% | 70.4% | 3.7% | 0.7% |
| Accommodate/reduced frequency | 7.4% | 47.4% | 2.6% | 24.2% | 77.1% | 5.5% |
| Difficulty | 1.2% | 19.1% | 5.6% | 0.9% | 8.8% | 3.3% |
| Need assistance | 3.1% | 23.4% | 90.1% | 4.5% | 10.4% | 90.6% |
| Visit 6 |  |  |  |  |  |  |
| Fully able | 84.3% | 10.3% | 1.3% | 62.0% | 3.9% | 0.4% |
| Accommodate/reduced frequency | 8.6% | 40.0% | 4.2% | 28.9% | 74.7% | 4.8% |
| Difficulty | 1.3% | 20.6% | 5.6% | 2.0% | 8.7% | 2.7% |
| Need assistance | 5.8% | 29.1% | 89.0% | 7.1% | 12.8% | 92.1% |

**eTable5a. Prevalence of positive response to each response category by self-care behavioral patterns: Results from 2-class latent class model.**

|  |  |  |
| --- | --- | --- |
| **Self-care Behavior****% or mean (standard error)** | **Unfavorable** | **Favorable** |
| Physical activity (Walk, vigorous activities) |  |  |
| Neither EitherBoth | 51.7%40.8%7.5% | 10.6%37.2%52.2% |
| Sleep quality |  |  |
| no insomniadifficulty initiating sleep onlydifficulty maintaining sleep onlyboth insomnia symptoms | 61.2%15.5%6.6%16.6% | 83.9%7.7%4.4%4.0% |
| Financial stability (0-4) | 2.69 (0.02) | 3.17 (0.02) |
| Healthy relationships |  |  |
| no visit, no restrictionno visit, with restrictionvisit, with restrictionvisit, no restriction | 17.3%5.2%12.0%65.5% | 3.2%0.1%1.4%95.3% |
| Community engagement (0-8) | 3.21 (0.05) | 5.16 (0.07) |
| Medication management |  |  |
| Self-manage, no difficulty/no medsSelf-manage, difficultyOthers manage | 77.4%8.1%14.5% | 93.8%6.1%0.0% |
| Non-physical activities |  |  |
| NoYes | 53.4%46.6% | 74.6%25.4% |
| Internet/email use |  |  |
| Both email/text and internetEither email/text or internetNeither | 12.1%16.5%71.5% | 55.7%18.5%25.8% |

**eTable5b. Prevalence of positive response to each response category by self-care behavioral patterns: Results from 3-class latent class model.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Self-care Behavior****% or mean (standard error)** | **Unfavorable** | **Less Favorable** | **Favorable** |
| Physical activity (Walk, vigorous activities) |  |  |  |
| Neither EitherBoth | 66.0%29.5%4.5% | 32.6%49.8%17.6% | 10.4%33.9%55.7% |
| Sleep quality |  |  |  |
| no insomniadifficulty initiating sleep onlydifficulty maintaining sleep onlyboth insomnia symptoms | 50.8%19.3%6.9%23.0% | 73.1%11.2%6.1%9.6% | 84.1%7.7%4.2%4.0% |
| Financial stability (0-4) | 2.64 (0.05) | 2.82 (0.13) | 3.20 (0.02) |
| Healthy relationships |  |  |  |
| no visit, no restrictionno visit, with restrictionvisit, with restrictionvisit, no restriction | 12.6%11.5%24.4%51.5% | 17.8%0.1%1.4%80.1% | 1.6%0.2%2.1%96.1% |
| Community engagement (0-8) | 3.46 (0.26) | 3.05 (0.13) | 5.67 (0.47) |
| Medication management |  |  |  |
| Self-manage, no difficulty/no medsSelf-manage, difficultyOthers manage | 59.8%11.3%28.9% | 93.0%4.9%2.1% | 92.8%6.9%0.3% |
| Non-physical activities |  |  |  |
| NoYes | 44.8%55.2% | 65.0%35.0% | 73.8%26.2% |
| Internet/email use |  |  |  |
| Both email/text and internetEither email/text or internetNeither | 10.0%13.2%76.7% | 19.5%21.2%59.3% | 60.8%16.5%22.8% |

**eTable6a. Results from 2 and 3-class LCA of physical activity over time.**

|  |  |
| --- | --- |
| 2-Class LCA | 3-Class LCA |
|  |  |

**eTable6b. Results from 2 and 3-Class LCA of sleep quality over time.**

|  |  |
| --- | --- |
| 2-Class LCA | 3-Class LCA |
|  |  |

**eTable6c. Results from 2, 3-Class LCA of healthy relationships over time.**

|  |  |
| --- | --- |
| 2-Class LCA | 3-Class LCA |
|  |  |

**eTable6d. Results from 2, 3-Class LCA of email/text and internet use over time.**

|  |  |
| --- | --- |
| 2-Class LCA | 3-Class LCA |
|  |  |

**eTable6e. Results from 2, 3-Class LCA of medication management over time.**

|  |  |
| --- | --- |
| 2-Class LCA | 3-Class LCA |
|  |  |

**eTable6f. Results from 2, 3-Class LCA of non-physical activities over time.**

|  |  |
| --- | --- |
| 2-Class LCA | 3-Class LCA |
|  |  |

**eTable6g. Results from 2, 3-Class latent profile analysis of financial stability over time.**

**Two-Class Model**

 Two-Tailed

 Mean S.E. Est./S.E. P-Value

Latent Class 1

 Means

 Visit1 2.047 0.029 70.063 0.000

 Visit2 2.001 0.032 62.084 0.000

 Visit3 1.933 0.032 60.533 0.000

 Visit4 1.981 0.033 60.592 0.000

 Visit5 1.994 0.034 58.204 0.000

 Visit6 2.053 0.040 51.607 0.000

Latent Class 2

 Means

 Visit1 3.218 0.011 284.795 0.000

 Visit2 3.283 0.012 277.694 0.000

 Visit3 3.312 0.013 248.121 0.000

 Visit4 3.350 0.014 234.642 0.000

 Visit5 3.303 0.015 226.448 0.000

 Visit6 3.316 0.014 230.186 0.000

**Three-Class Model**

Latent Class 1

 Means

 Visit1 1.905 0.031 61.063 0.000

 Visit2 1.833 0.036 51.492 0.000

 Visit3 1.778 0.033 54.569 0.000

 Visit4 1.845 0.036 50.860 0.000

 Visit5 1.861 0.038 48.501 0.000

 Visit6 1.901 0.042 45.718 0.000

 Latent Class 2

 Means

 Visit1 2.940 0.015 196.021 0.000

 Visit2 2.973 0.015 196.932 0.000

 Visit3 2.950 0.017 170.213 0.000

 Visit4 2.971 0.019 154.957 0.000

 Visit5 2.962 0.019 159.200 0.000

 Visit6 3.001 0.018 164.951 0.000

Latent Class 3

 Means

 Visit1 3.556 0.019 188.060 0.000

 Visit2 3.671 0.019 193.878 0.000

 Visit3 3.744 0.019 196.766 0.000

 Visit4 3.784 0.017 221.496 0.000

 Visit5 3.681 0.020 185.061 0.000

 Visit6 3.668 0.021 174.733 0.000

**eTable6h. Results from 2, 3-Class latent profile analysis of community engagement over time.**

**Two-Class Model**

 Mean S.E. Est./S.E. P-Value

Latent Class 1

 Means

 Visit1 2.992 0.043 69.977 0.000

 Visit2 2.963 0.046 64.268 0.000

 Visit3 2.934 0.050 58.183 0.000

 Visit4 2.913 0.056 52.305 0.000

 Visit5 2.902 0.058 50.227 0.000

 Visit6 2.941 0.061 48.477 0.000

Latent Class 2

 Means

 Visit1 6.106 0.060 102.296 0.000

 Visit2 6.240 0.061 102.478 0.000

 Visit3 6.164 0.061 100.318 0.000

 Visit4 6.211 0.064 97.609 0.000

 Visit5 6.130 0.067 92.047 0.000

 Visit6 6.005 0.071 85.175 0.000

**Three-Class Model**

Latent Class 1

 Means

 Visit1 2.228 0.048 46.460 0.000

 Visit2 2.118 0.054 39.417 0.000

 Visit3 2.060 0.054 38.107 0.000

 Visit4 2.034 0.057 35.630 0.000

 Visit5 1.991 0.059 33.751 0.000

 Visit6 2.040 0.067 30.364 0.000

Latent Class 2

 Means

 Visit1 6.733 0.054 125.098 0.000

 Visit2 6.871 0.047 145.643 0.000

 Visit3 6.781 0.052 130.680 0.000

 Visit4 6.802 0.054 126.535 0.000

 Visit5 6.772 0.059 113.852 0.000

Visit6 6.590 0.065 101.170 0.000

Latent Class 3

 Means

 Visit1 4.314 0.055 79.039 0.000

 Visit2 4.377 0.055 79.567 0.000

 Visit3 4.330 0.056 77.444 0.000

 Visit4 4.322 0.062 70.129 0.000

 Visit5 4.259 0.059 72.638 0.000

 Visit6 4.231 0.060 70.588 0.000

**eTable7. Frequency distribution of YoL, YAL, YHL, and YHAL observed during the 5-year follow-up among the 1,575 who died.**

|  |  |
| --- | --- |
| A | C |
| B | D |