**Table S1. Medication use of nursing home residents**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Medication** |  |  | **Total # medications** | **Total # PIMs** |
|  |  | **%** | **0-4** | **5-9** | **≥10** | **p** | **0** | **1** | **≥2** | **p** |
| **Total # medications** |  |  |  |  |  |  |  |  |
|  | 0-4 | 17.5 |  |  |  |  | 63.4 | 36.6 | 0 |  |
|  | 5-9 | 61.5 |  |  |  |  | 36.4 | 38.2 | 26.4 |  |
|  | ≥10 | 20.9 |  |  |  |  | 12.2 | 20.4 | 67.3 |  |
| **Cardiovascular** | **total users** | **83.3**  | 10.8 | 65.1 | 24.1 | \* | 35.9 | 31.3 | 32.8 |  |
|  | anti-hypertensive | 72.6  |  |  |  |  |  |  |  |  |
|  | circulatory | 48.3  |  |  |  |  |  |  |  |  |
| **Gastrointestinal** | **total users** | **76.5**  | 10.1 | 63.7 | 26.3 | \* | 33.5 | 34.1 | 32.4 |  |
|  | laxative | 45.3 |  |  |  |  |  |  |  |  |
|  | PPI | 26.9 |  |  |  |  |  |  |  |  |
| **Respiratory** | **total users** | **44.9**  | 7.6 | 61 | 31.4 | \* | 30.5 | 36.2 | 33.3 |  |
|  | antihistamine | 11.5  |  |  |  |  |  |  |  |  |
|  | antitussive | 6.4  |  |  |  |  |  |  |  |  |
|  | mucolytic | 32.9  |  |  |  |  |  |  |  |  |
| **Psychiatric** | **total users** | **35.9**  | 4.8 | 60.7 | 34.5 | \* | 4.8 | 33.3 | 61.9 | \* |
|  | hypnotic | 26.9  |  |  |  |  |  |  |  |  |
|  | antipsychotic | 12.0  |  |  |  |  |  |  |  |  |
|  | antidepressant | 9.8  |  |  |  |  |  |  |  |  |
| **Analgesic** | **total users** | **26.9**  | 14 | 56.1 | 29.8 |  | 36.8 | 24.6 | 38.6 |  |
|  | acetaminophen | 18.4 |  |  |  |  |  |  |  |  |
|  | opiod | 11.1 |  |  |  |  |  |  |  |  |
|  | NSAID1 | 7.6 |  |  |  |  |  |  |  |  |
| **Neurologic** | anti-epileptic | 18.4 |  |  |  |  |  |  |  |  |
|  | anti-parkinson | 11.1  |  |  |  |  |  |  |  |  |
|  | anti-dementia | 1.7 |  |  |  |  |  |  |  |  |
| **Metabolic** | anti-glycemic | 29.1  |  |  |  |  |  |  |  |  |
|  | lipid-lowering | 22.2  |  |  |  |  |  |  |  |  |
|  | anti-osteoporotic | 2.1  |  |  |  |  |  |  |  |  |
| **Other** | vitamin  | 15.8 |  |  |  |  |  |  |  |  |
|  | muscle relaxant | 5.6 |  |  |  |  |  |  |  |  |

\*≦0.001

**1** exclude Aspirin

**PPI** proton-pump inhibitor**, NSAID** non-steroidal anti-inflammatory drug

**Table S2. Potentially inappropriate medication use of nursing home residents**

|  |  |  |  |
| --- | --- | --- | --- |
| **Medication** |  |  | **Total # medications** |
|  |  |  | **0-4** | **5-9** | **≥10** | p |
| **Total # PIMs** | 0 | 35.5  | 31.3 | 61.4 | 7.2 | <0.001 |
|  | 1 | 34.2  | 18.8 | 68.8 | 12.5 |  |
|  | ≥2 | 30.3  | 0 | 53.5 | 46.5 |  |
| **Hypnotic** | **total users** | **26.9**  | 1.6 | 65.1 | 33.3 | <0.001 |
|  | 1 | 22.6  |  |  |  |  |
|  | ≥2 | 4.3  |  |  |  |  |
| **PPI** | **total users** | **26.9**  | 9.5 | 57.1 | 33.3 | 0.008 |
| **Anticholinergic** | **total users** | **25.2**  | 6.8 | 52.5 | 40.7 | <0.001 |
|  | ARS score 1-2 | 16.2  |  |  |  |  |
|  | ARS score ≥3 | 9.0  |  |  |  |  |
| **NSAID** | **total users** | **21.4**  | 7.3 | 65.9 | 26.8 | 0.140 |
|  | aspirin | 13.7  |  |  |  |  |
|  | non-aspirin | 7.6  |  |  |  |  |
| **Antipsychotic** | **total users** | **12.0**  | 10.7 | 42.9 | 46.4 | 0.002 |
|  | conventional | 3.8  |  |  |  |  |
|  | atypical | 8.1  |  |  |  |  |

**PIM** potentially inappropriate medication, **PPI** proton pump inhibitor, **ARS** anticholinergic risk scale, **NSAID** non-steroidal anti-inflammatory drug