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## Use of prescription drugs in the older adult population - a nationwide pharmacoepidemiological study

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## 1 Use of prescription drugs in the older adult population

### 2 – a nationwide pharmacoepidemiological study

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#### 29 Abstract

#### 30 Aim

31 Multi-morbidity and polypharmacy are common among older people. It is essential to provide a

- 32 better understanding of the complexity of prescription drug use among older adults to optimise
- 33 rational pharmacotherapy. Population-based utilisation data in this age group is limited. Using the
- 34 Danish nationwide health registries, we aimed to characterise drug use among Danish individuals
- 35  $\geq$  60 years.

#### 36 Methods

- 37 This is a descriptive population-based study assessing drug prescription patterns in 2015 in the full
- 38 Danish population aged  $\geq 60$  years. The use of specific therapeutic subgroups and chemical
- 39 subgroups and its dependence on age were described using descriptive statistics. Profiles of drug
- 40 combination patterns were evaluated using latent class analysis.

#### 41 **Results**

- 42 We included 1,424,775 residents (median age 70 years, 53% women). Of all the older adults, 89%
- 43 filled at least one prescription during 2015. The median number of drug groups used was five per
- 44 person. The most used single drug groups were anilides (34%), statins (33%), and platelet
- 45 aggregation inhibitors (24%). Eighteen drug profiles with different drug combination patterns were
- 46 identified. One drug profile with expected use of zero drugs and 11 drug profiles expected to receive
- 47 more than five different therapeutic subgroup drugs were identified.

#### 48 Conclusion

- 49 The use of drugs is extensive both at the population level and increasing with age at an individual
- 50 level. Separating the population into different homogenous groups related to drug use resulted in 18
- 51 different drug profiles of which 11 drug profiles received on average more than five different
- 52 therapeutic subgroup drugs.
- 53

54	What is already known about this subject
55	• The use of prescription drugs is common in older people
56	• The use of many drugs simultaneously increases the risk of adverse drug events and drug-
57	drug interactions
58	
59	What this study adds
60	• A better and updated understanding of the real-life utilisation of prescription drugs among
61	older adults ≥60 years
62	• An understanding of how drugs tend to compound
63	• Drug profiles with clinical recognisable medication profiles for the entire older population
64	

#### 65 Introduction

66 The use of prescription drugs is widespread in older people<sup>1,2</sup>, and the number of drugs used is 67 increasing with age <sup>3-6</sup>. This is prompted by an increasing prevalence of multi-morbidity and hospitalisations by age supplemented by a higher number of specialists who treat single diseases<sup>7–9</sup>. 68 69 Strict adherence to guidelines for each of the chronic conditions may complicate older persons' 70 pharmacotherapy and may be associated with adverse drug events<sup>10</sup>. Furthermore, the use of many 71 drugs simultaneously increases the risk of adverse drug events and drug-drug interactions<sup>11,12</sup>. Due to 72 age-related changes in pharmacokinetics and pharmacodynamics, older people are at very high risk of 73 such complications<sup>1,5,11,13</sup>. To this end, up to 30% of hospital admissions in older patients are related to 74 adverse drug events<sup>14-16</sup>. Thus, pharmacotherapy in the older adults is very complicated, and the vast 75 variety of drugs and drug combinations effect on the pharmacokinetics and pharmacodynamics and 76 makes it a difficult phenomenon to analyse.

77

78 A better and updated understanding of the real-life utilisation of prescription drugs is needed, and 79 further research is required to deepen our understanding of how drugs tend to compound and 80 interact. In addition, identifying common drug profiles, i.e. which drugs are used together, to 81 identify long-term risk drug profiles may enable health care policies, clinicians, and research fellows 82 to optimise a rational pharmacotherapy, prescribing and deprescribing patterns among older adults. 83 However, the population-based utilisation data in this age group is limited, and data are rather old. 84 Therefore, we aimed to provide a detailed study of drug use and how it changes with age to identify 85 different homogeneous drug profiles among older adults aged 60 years and older.

86

#### 87 Methods

88 We performed a nationwide cross-sectional drug utilisation study in the older adult Danish population.

89

#### 90 Data sources

91 Denmark has a public tax-financed health care system, which provides free and equal access

92 to primary medical care, hospitals, and home care services for all people. Patient co-payments are

93 required for prescription drugs. A central authority (the Reimbursement Committee) decides

94 whether a particular drug is reimbursable. Some prescription drugs, e.g. benzodiazepines are not

95 reimbursed<sup>17</sup>. Virtually all medical care in Denmark is furnished by the public health authorities,

96 whereby the data resources allow accurate population-based studies, covering all inhabitants of

97 Denmark.

98

Education Registry, the Registry for Migration, the Danish Registry of Causes of Death, and the Civil Registration System. The National Prescription Registry contains full information on all prescription drugs dispensed at Danish community pharmacies including prescriptions for nurs home residents <sup>17</sup> . Prescriptions are coded according to the Anatomical Therapeutic Chemical ( <i>t</i> classification system <sup>18</sup> . Drugs used during hospitalisation are not recorded in the register. The Danish Education Register contains information on ongoing and completed education <sup>19</sup> . The Register for Migration contains the date of both immigration and emigration <sup>20</sup> . The Danish Reg of Causes of Death contains data on all deaths among people dying in Denmark <sup>21</sup> . The Civil Registration System contains various information including sex, date of birth, and updated information on vital status <sup>22</sup> . All Danish residents are recorded in the registries with a uniquely	111011
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109 information on vital status <sup>22</sup> . All Danish residents are recorded in the registries with a uniquely	
110 personal and permanent identification number that makes it possible to crosslink individual-lev	l
111 data across the different registries.	
112	
113 Study population	
114 We included all Danish residents aged≥60 years on January 1 2016. Residents who migrated du	ing
115 2015 were excluded to ensure full follow-up data on all subjects.	
116	
117 Study variables	
118 Study drugs	
119 We retrieved information on all redeemed prescriptions in 2015. The drugs were categorised	
120 according to ATC-codes into the anatomical main group $(1^{st}$ level), therapeutic subgroup $(2^{nd}$ le	vel),
121 and chemical subgroup (4 <sup>th</sup> level) <sup>18</sup> . ATC Level 1, 2, and 4 are referred to as main drug group,	
122 therapeutic subgroup drug, and drug class, respectively. We defined drug users as individuals wh	10
123 had redeemed at least one prescription of a drug class or main drug group in 2015. In the latent	class
124 analysis (LCA), we disregarded the main drug group: anti-infectives for systemic use.	
125	
126 Sociodemographic factors	
127 The marital status was categorised according to status on January 1 ,2016, as: married, widowed	,
128 divorced or single, whereas education was categorised according to the highest attained education	onal
129 level at January 1 2016: short (7-10 years), medium (11-13 years) or long (≥14 years).	
130	

#### 131 **2.4 Analyses**

132 First, we described baseline characteristics, i.e. sex, marital status, and education of the study

133 population. To investigate simultaneous drug use, we measured the proportion of users of 0, 1-2, 3-

134 4, 5-9, or 10+ different drug classes in 2015 stratified by age groups. Second, we determined the ten

135 most frequently used drugs classes stratified by age groups. Third, we reported the number of

136 redeemed drug classes among all residents as mean, median, interquartile range, minimum, and

137 maximum, stratified by 1-year age categories. Finally, we identified the number of residents who

- filled at least one prescription of a main drug group in 2015. These analyses were stratified by 1-yearage categories.
- 140

141 Finally, we identified drug profiles using LCA. LCA is a method designed to identify subgroups of residents who show similar patterns of behaviour, e.g. drug use<sup>23</sup>. LCA classifies individuals into 142 143 mutually exclusive latent classes and assumes that given the latent class membership the use of drugs 144 is independent; thus, we used the LCA to identify different drug patterns in the general older adult 145 population. Each class identified in the LCA will thus have similar drug patterns and therefore have 146 the same drug profile. To reduced computer running time we selected five random samples of our 147 population, each with 50,000 residents. For the same reason, we chose drugs at therapeutic 148 subgroup level instead of drug classes. To avoid too few observation, the drugs were identified as 149 the 95% most used drugs in 2015. Thus, the LCA was based on drugs from 28 therapeutic 150 subgroups. Moreover, this made it possible to investigate the consistency of the drug profiles 151 identified in five random samples. The number of drug profiles was estimated in an iterative process 152 starting with a model with a two LCA class solution and continuing up to 20 LCA classes for each 153 of the five datasets. To measure the relative fit of the models, which refers to the adequacy of one 154 model's representation of data compared with that of another model, we used the Bayesian Information Criterion (BIC)<sup>24</sup>. This was used together with substantive interpretability and clinical 155 judgment to determine the number of drug profiles for each of the five datasets<sup>25</sup>. Afterwards, the 156 157 optimal number of drug profiles and parameter estimates were compared for the five datasets, and 158 the final number of drug profiles was decided. The entropy-based pseudo-R<sup>2</sup> measure can summarise the association between the drug profiles. The values 0.36, 0.65, and 0.90 represent low-, 159 medium-, and high-separation conditions, respectively<sup>26</sup>. Posterior probabilities for drug profile 160 161 membership were calculated for all residents in the cohort using the average parameter estimates from the five datasets. All residents were assigned to a specific drug profile based on modal 162 163 assignment (the drug profile with the highest posterior probability). The distribution of sex and the

- 164 median for age were performed for each drug profile. To account for local maxima of the likelihood
- 165 function for LCA we initially used 450 randomly generated starting values. If the best likelihood
- 166 were not replicated, then the number of starting values was increased.
- 167

#### 168 Ethics and reporting

- 169 The study was approved by the Scientific Board of Statistics Denmark and the Danish Data
- 170 Protection Agency (ref. 00003115). An approval from an ethics committee is not required for
- 171 registry-based studies in Denmark. No identifiable patient data could be retrieved. The study was
- 172 conducted by following the Strengthening the Reporting of Observational Studies in Epidemiology
- 173 (STROBE) recommendations<sup>27</sup>.

174 **Results** 

#### 175 Drug use

176 We identified 1,424,775 residents aged  $\geq 60$  years in Denmark in 2015. The female proportion was

- 177 53%. The median age of the population was 70 years (interquartile range (IQR) 65-77, range 60 to 110)
- 178 without differences across sex (70 years for men and 71 years for women). The most used single drug
- 179 classes measured by the number of unique users were anilides (34%), statins (33%), platelet aggregation
- 180 inhibitors (24%), proton pump inhibitors (21%), and calcium channel blockers (20%). (Table 1).
- 181
- 182 Of all the older adults, 89% filled at least one prescription during 2015. The median number of unique
- 183 drug classes filled was five per person (IQR, 2-8), similar for men and women (four drug classes (IQR,
- 184 2-8) and five drug classes (IQR, 2-9), respectively). We observed a trend toward an increasing number
- 185 of prescribed drug classes by age. However, with a levelling off around age 90 (Figure 1).
- 186

187 Cardiovascular drugs were the most used main drug group ( $1 \ge$  prescription filled by 62% of all

188 residents), followed by drugs related to the nervous system (48%), alimentary tract and metabolism

189 (38%), anti-infectives for systemic use (35%), and blood and blood-forming organs (34%). This was

- 190 largely consistent across age (Figure 2), although with a tendency towards a slightly increased
- 191 proportion of drugs related to blood and blood-forming organs was observed whereas the
- 192 proportion of drugs related to the genitourinary system and sex hormones decreased slowly by age.
- 193

#### 194 Drug profiles

By using the drugs from the 28 covering 95% of all drug groups used in 2015, we fitted up to a 20

196 LCA class model. Looking at model fit, the BIC was lowest in the model with 19-drug profiles for

- 197 four datasets and in the model with 18 drug profiles for one dataset. When comparing the
- 198 therapeutic subgroup drug probabilities within each drug profile among the five different datasets
- 199 for the 19-drug profile models, two of the 19-drug profiles were very differently estimated, showing

200 no consistency among the datasets in how to identify them. However, for the 18-drug profile model,

- 201 the results were similar (Appendix 1). Since no consistent pattern was obtained in the 19-drug
- 202 profile model, and with a clinical judgment by a clinical difference in the drug profiles we used the
- 203 18-drug profile model as our final model. Moreover, the mean entropy-based pseudo- $R^2$  measure
- was in our study 0.67 (range: 0.66-0.68), placing the separation of the 18 drug profiles as medium-
- 205 separation conditions.
- 206

207 Table 2 shows the conditional probabilities of the 28 therapeutic subgroup drugs in the 18 identified 208 drug profiles and the relationship between age and sex for each drug profile. Multiple drug use was 209 in this study defined as receiving drugs from five or more different therapeutic subgroup drugs. 210 Multiple drug use was observed in 11 drug profiles (drug profile 1 to 11). Two of these drug profiles 211 had a considerable overlap (drug profile 1 and 4). Thus, one drug profile (drug profile 1) consisted 212 of high probabilities for all 28 therapeutic subgroup drugs and was characterised by the highest 213 expected numbers of therapeutic subgroup drugs whereas the other drug profile (drug profile 4) had 214 a high probability of receiving all therapeutic subgroup except for mineral supplements and 215 diuretics. The second highest number of expected therapeutic subgroup drugs was observed in 216 combination with the highest median age, and the highest proportion of females. The probability of 217 receiving a drug for both the cardiovascular system, alimentary tract and metabolism, and for the 218 blood and blood-forming organs were characterised for drug profile 1-7. An expected number of 219 different therapeutic subgroup drugs under five were characterised for drug profile 12-18. The 220 highest proportion of males was found in drug profile 12. Similar, drug profile 16 was characterised 221 by low probability of receiving drugs except for hypertensive drugs. Drug profile 18 was the largest. 222 It had a prevalence of 21% and consisted of those with a probability of zero or very close to zero 223 for receiving any drug from the different included therapeutic subgroup drugs. The median age for 224 residents in drug profile 18 was the lowest among the 18 drug profiles at 67 years old, and the sex 225 ratio was also almost 1:1. Thus, the most prevalent drug profiles characterised by expected multiple 226 drug use were drug profile 1-6 (11.2-7.6 expected therapeutic subgroup drugs) and had a total 227 prevalence of 19%. To characterise the different therapeutic subgroup drugs used in LCA we have 228 listed the three most frequent drug classes at the 28 different therapeutic subgroup drugs in 229 Appendix 2.

#### 230 Discussion

231 In this cross-sectional nationwide drug utilisation study, we investigated prescribing patterns and 232 drug combination profiles in older adults in Denmark in 2015. Our study showed that extensive 233 drug use among older adults was very common. Older people aged  $\geq 60$  years, redeemed drugs from 234 five (median) different drug classes at the pharmacy each year. The number of redeemed drugs 235 increased by age from a median level at 4 for persons between 60 and 69 years old to a median level 236 at 8 for older people aged  $\geq$ 80 years. However, the distribution of drugs from main groups was 237 almost stable across age groups. Further, we identified 18 different drug profiles; one drug profile 238 with a low probability of receiving any drugs, which included 21 % of the population  $\geq 60$ , and 11 239 drug profiles, which on average received drugs from more than five different therapeutic subgroups. 240

241 Our study investigated current drug use among older adults in Denmark and showed that drug 242 consumption is well within the range of previous studies. Previous studies were, however, primarily 243 based on selected populations and fairly old data sets. To our knowledge, no other studies have 244 included the entire Danish population  $\geq 60$  years. A Swedish study showed that older adults ( $\geq 65$ ) used an average of 4.6 different drugs (ATC level 5)<sup>28</sup> whereas, a Danish study found that the median 245 number of drugs among residents  $\geq 60$  years was 5 (IQR: 2-9) (ATC level 5)<sup>29</sup>. We confirmed the 246 247 findings from Linjakumpu et al.<sup>3</sup> that the number of drugs increased by age. However, the increase in 248 the number of redeemed drug classes seems larger in our study. One reason for this might be the larger 249 population and the general increase in drug consumption. Similar to our findings, Lagerin et al.<sup>30</sup> 250 reported that the number of drugs at ATC level 3 stabilised at the age of 85-90. This stabilisation of the 251 drug use can be expected because the increased life expectancy in the older population has raised the 252 prevalence of multi-morbidity<sup>31</sup>, and the number of drugs was highly correlated with the number of 253 chronic conditions<sup>28</sup>. The impact of evidence-based clinical guidelines for the treatment of the specific 254 disease may also contribute to the observed increase in drug use<sup>32</sup>. This can be explained by the fact 255 that each guideline has several recommended drugs and the majority of older people are multimorbid.

256

We found that cardiovascular drugs were the most commonly used main drug group, which is in accordance with previous findings. Barat et al. found that the two most common prescription drugs among 75-years-old community-dwelling residents were cardiovascular drugs (25%) and central nervous system drugs  $(23\%)^{33}$ . In a Swedish study among older adults  $\geq$  78 years of age, cardiovascular drugs were also the most frequently used drugs followed by nervous system drugs, and alimentary tract metabolism drugs<sup>32</sup>. Similar results were found by Wastesson et al.<sup>34</sup>. We further found that the distribution of main drug groups was stable over age, which indicates that the drug patterns do notchange significantly with age and suggest that drugs may not be discontinued in late life.

265

266 A complex drug burden is potentially harmful to the patients and difficult to manage<sup>10,35</sup>. The drug 267 burden is often measured by the number of different drugs used but ignoring the complexity of the 268 drug profiles. To our knowledge, LCA has never been performed in a large, national population, and 269 with therapeutic subgroup drugs as outcomes. In previous studies, LCA has been used to define, e.g., 270 subtypes of drug abuse in a Swedish cohort (n=192,501)<sup>36</sup> and to identify patterns of drug use 271 associated with lower serum sodium concentration in older hospitalised patients  $(n=101)^{37}$ . In both studies, the drugs were selected to fit a selected patient group, and the analysis included only a limited 272 273 number of drugs or drug classes, whereas only three and six different drug profiles were identified. In 274 this study 18-drug profiles, i.e. clinical recognisable medication patterns were identified. For example, 275 drug profile 13 is characterised by a high probability of receiving drugs for diabetes, agents acting on 276 the renin-angiotensin system, and lipid-modifying agents. In general, the drug profiles demonstrated 277 very complex therapeutic profiles and reflecting the high level of multimorbidity. However, the drug 278 profiles should be explored more thoroughly to fit the clinical practice, e.g. to risk-stratified patients in 279 a hospital or a general practice. When identifying drug profiles, LCA is considered highly suitable 280 because the drug groups differ qualitatively from each other. Also, we found similar drug profiles for 281 the five randomly selected samples which indicates that the 18 drug profiles are very stable. The drug 282 profiles allow us to study drug use and drug combinations in a new way. By using the drug profiles, it is 283 possible to identify in which of the drug profiles a given drug is used, and thereby restrict studies of 284 adverse effects to individuals with different drug combination profiles. Real word evidence in different 285 drug profiles makes the result more usable in clinical practice. We believe that the new method is 286 important also when studying drug channelling bias in more sufficient ways, and when studying 287 polypharmacy more comprehensively.

288

#### 289 Strengths and limitations

Our study is the first study investigating drug profiles in a large population using LCA. The use of LCA in an unselected population enables a nuanced identification and description of drug profiles. More in-depth knowledge of the drug patterns is desired, e.g. studying drug profiles at drug class level instead of at therapeutic subgroup level. This was, however, not possible in this study due to the lack of computer power. In future studies, drug profiles have the potential to be evaluated on drug class level, to achieve knowledge on among other drug safety, interactions, adverse drug events, maybe by investigating individuals with a specific drug profile. Another strength of this study is that
data were obtained from nationwide registers containing high-quality data. This ensures complete
coverage and eliminates the risk of selection bias.

299

300 A limitation of this study is that certain drugs can be purchased over the counter in Denmark and 301 drug, therefore, can be slightly underestimated. Olesen et al.<sup>38</sup> found that 28 percent of the patients 302 aged 65 years or more used non-prescription drugs. Indeed, the majority are prescription drugs, 303 especially with respect to the most potent drugs and those with the greatest potential of interactions. 304 Another potential limitation is that we had no information on drug adherence among older adults. 305 Though we know the older adults have filled the prescription, we do not know whether the older 306 adults have taken the drug. At the same time, we eliminate primary non-adherence, which is a 307 strength. We required at least one prescription for all drugs in the analyses, though we did not know 308 if the older adults were compliant to the given drug. Due to the excessive computer running time, 309 we were further compelled to reduce the population to five random samples of 50,000 individuals 310 each. We assume a sample of 50,000 individuals as a large population, and that the results would not 311 be different compared with the final population.

312

313 In conclusion, we found that the use of drugs is extensive both at the population level and at the 314 individual level and that it is increasing with age. Cardiovascular drugs, analgesics and psychotropic 315 drugs were the most prevalent drug classes. Eighteen different drug profiles were identified, 11 drug 316 profiles reflecting probable drug combination profiles among users of multiple drug use. The 317 identified drug profiles described clinical recognisable medication patterns. The drug profiles have 318 the potential to be used in future studies investigating high-risk prescriptions patterns. Studies of the 319 older adult population with diverging drug profiles may provide useful information to prevent drug-320 related problems and optimise drug treatment. For instance, with more research into risk patterns, 321 we can produce risk profiles that will provide a better understanding of which patients benefit most 322 from medication review. Furthermore, these risk profiles may also benefit the patients when a new 323 medication is added to the treatment for a more rational drug prescribing.

324

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331

#### 332 Author Contributions

333 Christensen, Juul-Larsen, Petersen have full access to all the data in the study and takes responsibility

for the integrity of the data and the accuracy of the data analysis. Study concept and design:

335 Christensen, Pottegård, Petersen. Acquisition, analysis, or interpretation of data: Christensen,

336 Pottegård, Petersen. Drafting of the manuscript: All authors. Critical revision of the manuscript for

337 important intellectual content: All authors. Statistical analysis: Christensen, Petersen. Administrative,

technical, or material support: Petersen. Study supervision: Kaae, Andersen, Pottegård, Petersen.

339

#### 340 Conflict of Interest Disclosures

341 There are no competing interests to declare.

342

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Figure 1: Number of unique drug classes depicted as a function of age.

- 1 2 3 4 Boxes represent the interquartile range with the median score shown as a horizontal line and the
- means represented as circles.



4 Figure 2 Parts a-b: Overall distribution of drugs used.

5 2A: Number of main drug groups stratified by age. 2B: Percentage of main drug groups stratified by age.

#### 1 Table 1. Demographic and drug characteristics.

		Age groups (year)				
	Total	60-69	70-79	80+		
Characteristic	No. (%)	No. (%)	No. (%)	No (%)		
	1424775	688623 (48.3)	490295 (34.4)	245857 (17.3)		
Sociodemographic characteristics						
Female sex	759255 (53.3)	348609 (50.6)	258311 (52.7)	152335 (62.0)		
Marital status						
Married <sup>a</sup>	842138 (59.1)	456828 (66.3)	300875 (61.4)	84435 (34.3)		
Widowed	274533 (19.3)	48189 (7.0)	96843 (19.75)	129501 (52.7)		
Divorced	201153 (14.1)	112102 (16.3)	68038 (13.9)	21013 (8.6)		
Single	106951 (7.5)	71504 (10.4)	24539 (5.0)	10908 (4.4)		
Highest achieved education <sup>b</sup>						
Short (7-10 years)	498173 (36.0)	185095 (27.4)	186750 (39.2)	126328 (54.9)		
Medium (11–12 years)	551070 (39.9)	294205 (43.6)	188201 (39.5)	68664 (29.8)		
Long ( $\geq$ 13 years)	333118 (24.1)	195837 (29.0)	102088 (21.4)	35193 (15.3)		
Medication						
Median number drug classes (IQR <sup>c</sup> )	5 (2-8)	4 (1-7)	5 (3-9)	8 (4-11)		
Number of simultaneously used drugs classes						
0	155,692 (10.9)	105,130 (15.3)	40,986 (8.4)	9,576 (3.9)		
1-2	253,138 (17.8)	157,282 (22.8)	76,033 (15.5)	19,823 (8.1)		
3-4	264,930 (18.6)	141,372 (20.5)	90,590 (18.5)	32,968 (13.4)		
5-9	477,536 (33.5)	201,525 (29.3)	178,395 (36.4)	97,616 (39.7)		
10+	273,479 (19.2)	83,314 (12.1)	104,291 (21.3)	85,874 (34.9)		
10 most frequent drugs classes						
Anilids ((N02BE)	483,772 (34.0)	184,981 (26.9)	173,338 (35.4)	125,453 (51.0)		
HMG CoA reductase inhibitors (C10AA)	466,062 (32.7)	190,265 (27.6)	189,804 (38.7)	85,993 (35.0)		
Platelet aggregation inhibitors excl. heparin						
(B01AC)	337,985 (23.7)	109,735 (15.9)	134,318 (27.4)	93,932 (38.2)		
Proton pump inhibitors (A02BC)	295,668 (20.8)	120,132 (17.4)	108,428 (22.1)	67,108 (27.3)		
Dihydropyridine derivatives (C08CA)	285,250 (20.0)	107,662 (15.6)	110,412 (22.5)	67,176 (27.3)		
Beta blocking agents, selective (C07AB)	241,009 (16.9)	82,228 (11.9)	94,658 (19.3)	64,123 (26.1)		
Propionic acid derivatives (M01AE)	229,475 (16.1)	120,989 (17.6)	78,864 (16.1)	29,622 (12.0)		
ACE inhibitors, plain (C09AA)	206,732 (14.5)	80,935 (11.8)	79,301 (16.2)	46,496 (18.9)		
Beta-lactamase sensitive penicillins (J01CE)	199,701 (14.0)	94,581 (13.7)	67,817 (13.8)	37,303 (15.2)		
Thiazides and potassium in combination (C03AB)	185,262 (13.0)	65,308 (9.5)	71,188 (14.5)	48,766 (19.8)		

<sup>a</sup> Includes registered partnership <sup>b</sup> Missing: 42,414 people <sup>c</sup> IQR= interquartile range 2 3 4

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2 Table 1: The conditional probabilities of the 28 therapeutic subgroup drugs in the 18 identified drug profiles.

Profile	Pa	1	2	3	4	5	6	7	8
Profile size, No (%)		42,743 (3)	28,496 (2)	56,991 (4)	56,991 (4)	42,743 (3)	42,743 (3)	71,239 (5)	42,743 (3)
Age, median (IQR)	70 (62-77)	78 (71-84)	81 (72-89)	78 (71-84)	75 (69-82)	75 (68-82)	71 (66-77)	72 (68-78)	73 (66-81)
Sex, female (%)	53.3	62.5	72.7	48.7	49.7	61.1	68.6	36.1	74.9
Expected number of therapeutic subgroup drugs		11.2	8.3	8.1	7.6	7.6	7.2	6.7	6.7
Therapeutic subgroup drug									
A02: Drugs for acid related disorders	22%	72%	60%	30%	49%	45%	43%	20%	62%
A06: Drugs for constipation	5%	29%	43%	6%	12%	22%	2%	1%	25%
A10: Drugs used in diabetes	11%	34%	5%	20%	16%	28%	11%	55%	2%
A12: Mineral supplement	10%	63%	74%	59%	0%	16%	8%	18%	2%
B01: Antithrombotic agents	30%	90%	43%	99%	100%	62%	28%	77%	17%
B03: Antianemic preparations	6%	25%	22%	9%	13%	17%	5%	11%	14%
C01: Cardiac Therapy	6%	38%	12%	46%	33%	3%	3%	8%	2%
C03: Diuretics	23%	91%	91%	96%	12%	36%	37%	48%	18%
C07: Beta blocking agents	20%	59%	22%	81%	55%	25%	21%	55%	10%
C08: Calcium channels blockers	21%	41%	24%	33%	33%	39%	32%	62%	12%
C09: Agents acting on the renin-angiotensin system	36%	60%	27%	66%	47%	62%	59%	96%	20%
C10: Lipid modifying agents	33%	76%	15%	64%	73%	73%	45%	91%	16%
D07: Topical dermatological Corticosteroids	13%	26%	22%	15%	21%	16%	35%	13%	23%
G03: Sex hormones and modulators of the genital system	10%	17%	14%	6%	13%	10%	26%	3%	26%
G04: Urologicals	10%	16%	11%	13%	18%	14%	12%	14%	11%
H02: Corticosteroids for system use	6%	27%	19%	8%	12%	0%	19%	2%	17%
H03: Thyroid therapy	6%	14%	12%	10%	8%	11%	10%	5%	11%
M01: Antiinflammatory and antirheumatic products	19%	25%	23%	10%	24%	19%	32%	11%	46%
M05: Drugs for treatment of bone diseases	6%	16%	19%	6%	11%	8%	8%	1%	16%
N02: Analgesics	38%	94%	89%	53%	76%	73%	63%	31%	97%
N03: Antiepileptics	5%	20%	17%	3%	10%	20%	4%	3%	23%
N04: Anti-parkinson drugs	2%	6%	6%	1%	3%	7%	2%	0%	7%
N05: Psycholeptics	15%	45%	42%	16%	30%	46%	28%	6%	55%
N06: Psychoanaleptics	13%	40%	44%	11%	22%	61%	15%	8%	48%
R01: Nasal preparations	6%	11%	5%	4%	9%	2%	41%	3%	13%
R03: Drugs for obstructive airways diseases	13%	41%	29%	19%	22%	13%	43%	7%	25%
R06: Antihistamines for systemic use	6%	17%	12%	4%	11%	6%	43%	3%	19%
S01: Ophthalmologicals	17%	31%	29%	18%	26%	23%	48%	17%	31%

Profile	9	10	11	12	13	14	15	16	17	18
Profile size, N (%)	71239 (5)	28,496 (2)	71,239 (5)	113,982 (8)	56,991 (4)	1,245 (0.1)	128,230 (9)	156,725 (11)	99,734 (7)	299,203 (21)
Age, median (IQR)	71 (66-77)	74 (68-81)	74 (68-82)	72 (68-79)	70 (65-75)	69 (64-75)	68 (64-74)	70 (65-75)	69 (64-74)	67 (63-72)
Sex, female (%)	55.1	69.2	75.3	34.7	39.0	63.8	60.8	50.2	62.7	49.0
Expected number of therapeutic Subgroup drugs	6.4	5.2	5.1	4.3	4.2	3.3	3.0	2.9	2.8	0.5
Therapeutic subgroup drug			_							
A02: Drugs for acid related disorders	41%	33%	18%	13%	14%	17%	25%	10%	18%	3%
A06: Drugs for constipation	4%	5%	2%	0%	1%	7%	3%	0%	1%	0%
A10: Drugs used in diabetes	18%	4%	7%	3%	56%	2%	1%	3%	1%	1%
A12: Mineral supplement	7%	7%	41%	1%	0%	0%	0%	4%	0%	0%
B01: Antithrombotic agents	35%	30%	24%	97%	34%	10%	3%	7%	4%	1%
B03: Antianemic preparations	6%	16%	6%	3%	8%	7%	4%	2%	4%	1%
C01: Cardiac Therapy	1%	1%	1%	13%	0%	1%	0%	1%	1%	0%
C03: Diuretics	32%	20%	100%	12%	8%	6%	5%	21%	4%	1%
C07: Beta blocking agents	23%	10%	30%	47%	4%	8%	3%	17%	2%	1%
C08: Calcium channels blockers	43%	23%	33%	25%	21%	8%	4%	43%	4%	1%
C09: Agents acting on the renin-angiotensin system	72%	33%	43%	42%	69%	14%	11%	68%	10%	4%
C10: Lipid modifying agents	55%	28%	31%	66%	85%	16%	7%	28%	11%	4%
D07: Topical dermatological Corticosteroids	14%	8%	15%	10%	10%	12%	11%	10%	22%	5%
G03: Sex hormones and modulators of the genital system	12%	11%	14%	4%	4%	15%	13%	7%	19%	5%
G04: Urologicals	14%	7%	4%	14%	14%	7%	9%	10%	10%	4%
H02: Corticosteroids for system use	6%	52%	4%	2%	2%	1%	5%	1%	10%	0%
H03: Thyroid therapy	6%	10%	12%	4%	6%	9%	4%	4%	7%	2%
M01: Antiinflammatory and antirheumatic products	71%	18%	16%	7%	14%	8%	58%	9%	10%	4%
M05: Drugs for treatment of bone diseases	4%	43%	7%	3%	2%	7%	6%	3%	8%	2%
N02: Analgesics	100%	60%	42%	20%	22%	35%	78%	13%	17%	3%
N03: Antiepileptics	7%	3%	2%	2%	1%	11%	3%	1%	1%	0%
N04: Anti-parkinson drugs	2%	2%	1%	1%	1%	5%	1%	0%	0%	0%
N05: Psycholeptics	18%	14%	12%	5%	5%	46%	10%	5%	9%	1%
N06: Psychoanaleptics	9%	15%	8%	5%	7%	45%	5%	4%	5%	1%
R01: Nasal preparations	5%	0%	2%	4%	3%	2%	4%	3%	23%	1%
R03: Drugs for obstructive airways diseases	11%	44%	12%	7%	7%	7%	9%	6%	26%	2%
R06: Antihistamines for systemic use	5%	0%	4%	2%	3%	3%	3%	2%	18%	0%
S01: Ophthalmologicals	16%	19%	18%	13%	14%	16%	12%	12%	30%	7%

 a=probability of receiving the therapeutic subgroup drug in general

 Bold: 25% Increase of the overall probability. The colored boxes: Increase of at least 10 percent points over the overall probability. Different colors represent different main groups

# Appendix 1:

- 2 Supplement to: Use of prescription drugs in the older adult population a nationwide
- 3 pharmacoepidemiological study. Christensen LD\*, Reilev M, Juul-Larsen HG, Jørgensen LM, Kaae
- 4 S, Andersen O, Pottegård A, Petersen J. \*Corresponding author: Clinical Research Center,
- 5 Copenhagen University Hospital Hvidovre, Denmark, Kettegaard Allé 30, 2650 Hvidovre,
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Figure 3. 18 drug profile model. Five datasets with 50,000 individuals for each class.

#### 1 Appendix 2:

2 Supplement to: Use of prescription drugs in the older adult population – a nationwide pharmacoepidemiological
3 study. Christensen LD\*, Reilev M, Juul-Larsen HG, Jørgensen LM, Kaae S, Andersen O, Pottegård A, Petersen J.
4 \*Corresponding author: Clinical Research Center, Copenhagen University Hospital Hvidovre, Denmark, Kettegaard
5 Allé 30, 2650 Hvidovre, Denmark. E-mail: Line.due.christensen@regionh.dk or linedue@gmail.com, phone: (+45)
6 38623350
7

8 Table 3. 7	Three most frequent	drug classes in the	28 therapeutic subgroup	p drugs used for the	Latent Class Analysis
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A02: Drugs for acid related disorders         A02BC proving pump inhibitors, A02Ar magnetian compounds           A04: Drugs for acid related disorders         and complexes of aluminam, calcium and magnetian compounds           A04: Drugs for acid related disorders         and complexes of aluminam, calcium and magnetian compounds           A04: Drugs for acid related disorders         A04AP. Comonically acting latentizes, A06AP. Comonically acting latentizes, A06AP. Comonically acting latentizes, A06AP. Comonically acting latentizes, A06AP. Comparison of a strain and analogues for injection, A06AP. Comonically acting latentizes, A06AP. Comparison of an analogues for injection, A06AP. Comonically acting acting latentizes, A06AP. Comparison of an analogues, B03AP. Strain B12, Comparison of an analogues, B03AP. Tom Bivalen, and proparations           B03: Antianemic preparations         B03AP. Tom Bivalen, and proparations with vitamin K antagonists, B03AP. Tom Bivalen, and proparations with vitamin K, Co3DAY. A06AP. Comparations and proparations and proparations and proparations and proparations and proparations and proparations and proparations. Co3AP. Statistica and promating in combination, C03CA: Salfonamides, plain, C03DAY. A02AP. Combining agents, where the Docking agents, co7AAP. Tech Bivalen, and proparations, moderatery comparations and analogues of the acid and derivatives, C08DAP. Thereas, C03AP. There are an analogue acting agents, and acting agents, core acting on the renin-angiotensin system and proparations and proparations. C04AP. Hyper and Bea blocking agents, C07AP. Tech Bivale Biocking agents, core acting on the renin-angiotensin system and controsterols. Controsterols and controsterols. C04DP. Analogue and analogue acting agents, C10AP. There and a controsterols. C04DP. Analogue and analogue acting agents, C10AP. There anta	Therapeutic subgroup drugs	Drug classes
1002       Diags for constipation       A06.D rugs for constipation         A06. Drugs for constipation       A04.D Consciently acting lasaries, A06AB: Connect lasaries, A06AB: Connect lasaries, A06AB: Connect lasaries, A06AC: Fuennas         A10. Drugs used in diabetes       A10BA: Biguanides, A10BB: Sulforytures, A10AE: Insulins and analogues for injection, lang-acting         A12. Mineral supplement       A12BA: Poussian, A12AA: Calcium, A12AX: Calcium, combinations with vitamin D and/or other drag agregation inhibitors excl. heparin, B01AA: Vitamin K antagonists, B01AP: Direct factor Xa inhibors         B03. Antianemic preparations       B01AA: Vitamin H2 (cyanocoblanimi and analogues), B03BB: Folic acid and derivatives, B03AA: Ion braket, oral preparations         C01: Cardiac Therapy       C011A: Organic mitrats, C01AA: Digitali gytcosides, C01BD: Antiarchythmics, class III         C03: Durectes       C07AB: The blocking agents, eldective, C07AG: Alpha and beta blocking agents, class, III         C08: Calcium channels blockers       C08A: Diaphoppridme derivatives, OBDA: Phenylalkytamine derivatives, C08DB: Benzofilazepine derivatives, C08DA: Benzylalkytamine derivatives, C08DB: Benzofilazepine derivatives         C09: Agents acting on the renin-angiotensin system       C02A: C1Abi/Hydopyridme derivatives, C00AX: Other lipid modifying agents, C01AA: C04B: Efficience and modulators of the genital system         C07A: Corricosteroids       C07A: Corricosteroids, potent (group III), D07AB: Corricosteroids         C07: Topical dermatological Corricosteroids       C07A: Corricosteroids, Potent digrow, potent (group III	A02: Drugs for acid related disorders	A02BC: proton pump inhibitors A02AA: magnesium compounds A02AD: combinations
A06: Drugs used in diabetes         A06AD: Ormorically acring learning. A06AB: Consert learning. A06AB: Hononning learning. A06AB: Consert learning. A06AB: A06AB: A	1102. Drugs for acid related disorders	and complexes of aluminium, calcium and magnesium compounds
A10: Drugs used in diabetes       A108A: Bigunide, A108B: Sulfonyhreas, A10AE: Insulins and analogues for injection, long acting         A12: Mineral supplement       A128A: Fostsuim, A12AA: Calcium, A12AX: Calcium, combinations with vitamin D and // or ther drugs         B01: Antithrombotic agents       B01/AC: Platele aggregation inhibitors excl. hepatin, B01AA: Vitamin K antagonists, B03: Antianemic preparations         B03: Antianemic preparations       B03AA: Yon inbitors         B03: Cardiac Therapy       C01DA: Organic nitrates, C01AA: Digitalis glycosides, C01BD: Antiarrhythmics, class III         C03: Duretics       C03AB: Thaizeds and potassim in combination, C03CA: Sulforamides, plain, C03DA: Alboring agents, adective, C07AG: Alpha and beta blocking agents, plain, C03DA: Beta blocking agents, monsdetcive         C09: Real blocking agents       C07AE: Beta blocking agents, C07AA: Beta blocking agents, C07AA: Beta blocking agents, C09DA: C08DA: Phenylalkylamine derivatives, C08DB: Benotochargeline derivatives         C09: Agents acting on the renin-angiotensin system       C09AA: C0E: hibbiors, plain, C09CA: Angiotensin II antagonists, plain, C09DA: Angiotensin II antagonists, plain, C09DA: Angiotensin II antagonists, plain, C09DA: C00AC: Other lipid modifying agents         C07: Dipical dermatological Corticosteroids       D07A: C00AC: ID4A: CDA: C04A: E04B: Benotochargen, addeted potent (group III), D07AB: Corticosteroids, moderately potent (group III), D07AB: Corticosteroids, moderately potent (group III), D07AB: Corticosteroids, moderately potent (group III), D07AB: C04B: Drogssogen and estrogens, fuel, C04B: C04B: Drogssogens, and estrogens, fuel, C04B: C04B: Bindacob derivatives, M0	A06: Drugs for constinution	A06AD: Osmotically acting laxatives, A06AB: Contact laxatives, A06AG: Enemas
1100-100g0 fact in matches       Iong-acting       Optimizations       Iong-acting         A12: Mineral supplement       A12AR: Potssisum, A12AX: Calcium, and A2AX: Calcium, combinations with vitamin D         B01: Antithrombotic agents       B01AC: Platele eggesgation inhibitors excl. hepatin, B01AA: Vitamin K antagonists,         B03: Antianemic preparations       B03A: Notamin B12 (spanocobalamin and analogues), B03BB: Folic axid and derivatives,         B03A: Iron breachin, oda preparation, oda preparations, C00CA: Subfammedies, plain, C03DA:       C01DA: Organe mirates, C01AA: Digitalis glycosides, C01BD: Antiarchythmic, class III         C03: Durrefies       C03AB: Thiraides and potossium in combination, C03CA: Subfammedies, plain, C03DA:         C03: Burrefies       C03AB: Thiraides and potossium in combination, C03CA: Subfammedies, plain, C03DA:         C058: Calcium channels blockers       C06AC: Dhythychroyfidine derivatives, C08DB:         C069: Agents acting on the renin-angiotensin system       C09AA: C1: Dhythychroyfidine derivatives, C04AC: C04A: C04A: C04A: C04A: C04A: C14AB         C077: Topical dermatological Corticosteroids       D07A: C Corticosteroids, potent (group III), D07AB: Corticosteroids, protent (group III), D07AB: Corticosteroids, Progestogens and estrogens, field combinatione, C04A: A1MB Corticosteroids, Progestogens and estrogens, field (PHB: Drugs used in cercelic dyrburs, adminictone, C04A: A1MB Corticosteroids, Progestogens and estrogens, field (PHB: Drugs used in cercelic dyrbu	A10: Drugs used in diabetes	A10BA: Biguanides A10BB: Sulfonylureas A10AE: Insulins and analogues for injection
A128 Mineral supplement       A128A: Forassium, A12AX: Calcium, A12AX: Calcium, combinations with vitamin D         B01: Antichrombotic agents       B01AC: Platclet aggregation inhibitors ext. heparin, B01AA: Vitamin K antagonists,         B03: Antianemic preparations       B03BA: Vitamin B12 (cyanocobalamin and analogues), B03BB: Folic acid and derivatives,         B03: Antianemic preparations       B03BA: Vitamin B12 (cyanocobalamin and analogues), B03BB: Folic acid and derivatives,         C01: Cardiac Therapy       C01DA: Organic matexas, C01AA: Digitalis glycosides, C01BD: Antiarchythmics, class III         C03: Dittretics       C03AB: Thazides and potassum in combination, C03CA: Sulforamides, plain, C03DA: Aldoterone antagenosits         C07: Beta blocking agents       C07AB: Beta blocking agents, non-selective         C08: Calcium channels blockers       C08CA: Dihydropyridine derivatives, C08DA: Phenylalkylamine derivatives, C08DB: Benzochizasgrine derivatives         C09: Agents acting on the renin-angiotensin system       Angiotensin I antagonists, plain, C09DA: Angiotensin I antagonists, plain, C09DA: Corricosteroids, moderately potent (group II), D07AB. Co	The Drugs used in diabetes	long-acting
and/or other drugs     and/or other drugs       B01: Antithrombotic agents     B01AC: Platet agregation inhibitors excl. heparin, B01AA: Vitamin K antagonists, B03: Antianemic preparations       B03: Antianemic preparations     B03BA: Vitamin B12 (cyanocobalamin and analogues). B03BB: Folic acid and derivatives, B03AA: Iron bivalent, oral preparations       C01: Cardiac Therapy     C01DA: Organic mirates, C01AA: Digitalis glycosides, C01BD: Antiarrhythmics, class III       C03: Diurcitics     C03ABI: Thizides and potossium in combination, CDCA: Subformates, plain, C03DA: Aldosteron antagonists       C07: Beta blocking agents     C07AB: Beta blocking agents, solective, C07AG: Alpha and beta blocking agents, c07AA: Beta blocking agents, non-selective       C09: Agents acting on the renin-angiotensin system     C09AA: ACI: bihydroyndine derivatives, C08DA: Phenylalkylamine derivatives, C08DB: Bervoothizoprine derivatives, C10AB: COAS: C10AA: FIDK Proprintine derivatives, C10AB: Endiportine derivatives, C10AB: Coloxestroids, c09DA: Angiotensin II antagonists, and diarcties       C07: Topical dermatological Corticosteroids     D07AC: Corticosteroids, potent (group III), D07AB: Corticosteroids, moderately potent (group II), D07AD: Corticosteroids, were potent (group III), D07AB: Corticosteroids, moderately potent (group III), D07AD: Corticosteroids agents, non-selectivey       G04: Urological     G04HB: Drugs used in exectil dysfunction, G01A: Mrogeogens and estrogens, face combination, G03A: Mrogeogens and estrogens, sequental preparations       G04: Urologicals     G04HB: Drugs used in exectil dysfunction, G01A: Alpha-derionecceptor antagonists, M01A: Other antinflammatory and antirheumatic products    <	A12: Mineral supplement	A12BA: Potassium, A12AA: Calcium, A12AX: Calcium, combinations with vitamin D
B01: Antithrombotic agents     B01AC Direct factor Xa inbibitors       B03: Antianemic preparations     B03AV. Utamin B12 (cynoncobalamin and analogues), B03BE Folic acid and derivatives, B03BV. Utamin B12 (cynoncobalamin and analogues), B03BE Folic acid and derivatives, B03AV. Itami Sulach, oral preparations       C01: Cardiac Therapy     C01DA: Organic intrates, C01A: Digitals glycosides, C01BD: Antianrhythmics, class III       C03: Diuretics     C03AB: Thiazides and potassium in combination, C03A: Sulfonamides, plain, C03DA: Mloostrone antigonists       C07: Beta blocking agents     C07AB: Beta blocking agents, sole-selective       C08: Calcium channels blockers     C08CA: Dhydropyridine derivatives, C08DA: Phenylalkylamine derivatives, C08DB: Benzothizaepine derivatives       C09: Agents acting on the renin-angiotensin system     C09AA: ACI: inhibitors, plain, C09CA: Angiotensin II antagonists and duretics       C10: Lipid modifying agents     C10AA: HIMG CAA reductase inhibitors, C10AX: Other lipid modifying agents, C04AB: Tibartes       D07: Topical dermatological Corticosteroids     D07AC: Corticosteroids, potent (group IIV)       G03: Sex hormones and modulators of the genital system     G04RC: Natural and sensityntheic estrogens, square, G04BC: Thigo adentonece       H02: Corticosteroids for system use <sup>4</sup> H02AA: Thyroid hormones, H03BB: Stiffer constinuity induzole derivatives, H03BA: Thyroid hormones, H03BB: Stiffer constinuing iniduzole derivatives, H03BA: Thyroid hormones, H03BB: Stiffer constinuing iniduzole derivatives, H03BA: Thyroid hormones, H03BB: Stiffer constinuing iniduzole derivatives, H03BA: Thyroid hormones, H03BB: Stiffer constinuing ininduzole derivati		and/or other drugs
B01A.         Direct factor Xa inhibitors           B03: Antianemic preparations         B03A.V titamin B12 (spancobalamin and analogues), B03BB: Folic acid and derivatives, B03AA: Iron bivalent, ond preparations           B03: Antianemic preparations         B03A.V titamin B12 (spancobalamin and analogues), B03BB: Folic acid and derivatives, B03AA: Iron bivalent, ond preparations           C03: Diurctics         C03AB: Thiazides and potassium in combination, C03CA: Sulformamides, plain, C03DA: Aldostrone antagonists           C07: Beta blocking agents         C07AB: Beta blocking agents, solective, C07AG: Alpha and beta blocking agents, C07AA: Beta blocking agents, cons-selective           C08: Calcium channels blockers         C08CA: Dihydroprydine derivatives, C08DA: Phenylalkylamine derivatives, C08DB: Benzothiazepine derivatives           C09: Agents acting on the renin-angiotensin system         C07AA: Corticosteroids in 1 antagonists and diuercits           C10: Lipid modifying agents         C10AA: HING CoA reductase inhibitors, C10AS: Other lipid modifying agents, C10AB: Fibrates           D07: Topical dermatological Corticosteroids         G07AD: Corticosteroids, rectro gent (group HI), D07AB: Corticosteroids, moderately potent (group II), D07AD: Corticosteroids, moderately potent (group II), D07AD: Corticosteroids, moderately potent (group II), D07AB: Cart blocking gents, C10AB: Fibrates           G04: Urological         G04BE: Drugs used in crectific dysfunction, G04CA: Alpha-adtenoreceptor antagonists, fide continuations, G04FE: Progestogens and estrogens, fide continuations, G04FE: Drugs used and cervatives, N01AB: Acting bastres, N01AB: Acting bound in the	B01: Antithrombotic agents	B01AC: Platelet aggregation inhibitors excl. heparin, B01AA: Vitamin K antagonists,
B03BA: Vitamin B12 (syanocobalamin and anologues), B03BB: Folic acid and derivatives, B03BA: Folic acid and derivatives, B03BB: Folic acid and derivatives, B03AA: Fono biavalent, oral preparations         C01: Cardiac Therapy       C01DA: Organic nitrates, C01AA: Digital System, C07AC: Sulfonamides, plain, C03DA: Aldostrone antagonists         C07: Beta blocking agents       C07AB: Beta blocking agents, sole-selective         C08: Calcium channels blockers       C08CA: Dihydropyridine derivatives, C08DA: Phenylalkylamine derivatives, C08DB: Benzohitazgiro edrivatives         C09: Agents acting on the renin-angiotensin system       C09AA: ACE inhibitors, plain, C09CA: Alpha and beta blocking agents, conselective         C01: Lipid modifying agents       C10AA: HIMG CoA reductase inhibitors, C10AX: Other lipid modifying agents, conselective         C01: Lipid modifying agents       C10AA: HIMG CoA reductase inhibitors, C10AX: Other lipid modifying agents, conselective         C03: Sex hormones and modulators of the genital system       G03CA: Natural and scrinsynthetic extrogens, plain, C09AA: Alpha-adrenoreceptor antagonists, and setrogens, plain, C09AA: Microloxi, C04AA: Microloxi, C04AA: Microloxi, C04AA: Microloxi, C04AA: Microloxi, C04AA: Conselective, C04BAB: Drugs of unitary frequency and increases, playdenetic extrogens, plain, C03AA: Natural, Continuence         G04: Urologicals       G04AB: Torgita used in arcetic deviatives, Alpha-adrenoreceptor antagonists, facel combination, G04A: Microloxi, G04AA: Microloxi, G04AA: Microloxi, G04AB: Concesteroids         M01: Antiinflammatory and antirheumatic products       M01AA: Toropial ad derivatives, N04AB: Amore and rel	~	B01AF: Direct factor Xa inhibitors
B03Ak: Iron bivalent, oal preparations           C01: Cardiac Therapy         C01DA: Digitalis glycosides, C01BD: Antiarrhythmics, class III           C03: Diuretics         C03AB: Thiazides and potassium in combination, C03CA: Sulfonamides, plain, C03DA: Adosterone antagonists           C07: Beta blocking agents         C07AB: Beta blocking agents, selective, C07AG: Alpha and beta blocking agents, conselective           C08: Calcium channels blockers         C08CA: Dihydropryidine derivatives, C08DA: Phenylalkylamine derivatives, C08DB: Beta blocking agents, son-selective           C09: Agents acting on the renin-angiotensin system         C09AA: ACI: Inhibitors, plain, C09CA: Angiotensin II antagonists, plain, C09DA: Angiotensin II antagonists, plain, C09DA: Orticosteroids, polarit, C09CA: Orticosteroids, polarit, C09CA: Orticosteroids, moderately potent (group ID, D07AB: Corticosteroids, potent (group IID), D07AB: Corticosteroids, moderately potent (group ID, D07AD: Corticosteroids, potent (group IID), D07AB: Corticosteroids, moderately potent (group ID, D07AD: Corticosteroids, G04FB: Progestogens and estrogens, fised combinations, G04FB: Progestogens and estrogens,	B03: Antianemic preparations	B03BA: Vitamin B12 (cyanocobalamin and analogues), B03BB: Folic acid and derivatives,
C01: Cardiac Therapy       C01DA: Organic intrasts, C01A: Digitalia glycosides, C01BD: Antiarrhythmics, class III         C03: Diuretics       C03AB: Thiadies and potassium in combination, C03CA: Sulfonantides, plain, C03DA: Aldosterone antagonists         C07: Beta blocking agents       C07AB: Beta blocking agents, selective, C07AG: Alpha and beta blocking agents, c08DA: Merghanine derivatives, C08DA: Phenylalkylamine derivatives, C08DA: Phenylanes, C08DA: Phenylankylamine derivatives, C		B03AA: Iron bivalent, oral preparations
C03: Diuretics         C03AB: Thiazides and potassum in combination, C03CA: Sulfonamides, plain, C03DA: Aldosterone antagonists           C07; Beta blocking agents         C07AB: Beta blocking agents, selective, C07AG: Alpha and beta blocking agents, C07AA: Beta blocking agents, no.selective           C08: Calcium channels blockers         C08CA: Dihydropyridine derivatives, C08DA: Phenylalkylamine derivatives, C08DB: Benzothiazepine derivatives, C08DA: Phenylalkylamine derivatives, C08DA: C09: Agents acting on the renin-angiotensin system           C09: Agents acting on the renin-angiotensin system         C04AA: C1: Inhibitors, plain, C09CA: Angiotensin II antagonists, plain, C09DA: Angiotensin II antagonists, plain, C00AC: ONA: Other lipid modifying agents, C10AB: Fibrates           D07: Topical dermatological Corticosteroids         D07AC: Corticosteroids, potent (group III), D07AB: Corticosteroids, moderately potent (group II), D07AD: Corticosteroids, reorgens, sequental preparations           G04: Urologicals         G04BB: Drugs used in erectile dysfunction, G04CA: Alpha-adrenoreceptor antagonists, G04BD: Drugs for urinary frequency and incontinence           H02: Corticosteroids for system use <sup>4</sup> H02AB: Clacocorticoids, H02AA: Mineralocorticoids           H03: Thyroid therapy         H03A: Thyroid hormones, H03BB: Sulfur-containing inidazole derivatives, H03BA: Thiotarcels           M01AE: Order antinflammatory and antirheumatic products         M01AB: N04E antinflamory and antirheumatic agents, no-steroids, N03AB: Cher antinflammatory and antirheumatic agents, no-steroids           N02: Analgesics         N02BE: Antilde, N02AX: Other opioids, N02AA: Natu	C01: Cardiac Therapy	C01DA: Organic nitrates, C01AA: Digitalis glycosides, C01BD: Antiarrhythmics, class III
Other         Operation           C07: Beta blocking agents         CO7AB: Eta blocking agents, selective, C07AG: Alpha and beta blocking agents, C07AA: Beta blocking agents, non-selective           C08: Calcium channels blockers         CO8C: Dibydcopyridine derivatives, C08DA: Phenylalkylamine derivatives, C08DA: Benzothiazepine derivatives           C09: Agents acting on the renin-angiotensin system         CO9AA: ACE inhibitors, plain, C09CA: Angiotensin II antagonists, plain, C09DA: Angiotensin II antagonists and diarctics           C10: Lipid modifying agents         C10AA: HMG CoA reductase inhibitors, C10AX: Other lipid modifying agents, C10AB: Florates           D07: Topical dermatological Corticosteroids         D07AC: Corticosteroids, very potent (group IIV)           G03: Sex hormones and modulators of the genital system         G03CA: Natural and semisynthetic extrogens, plain, G03FA: Progestogens and estrogens, freed combinations, G03FB: Progestogens and estrogens, freed combinations, G04FB: Drugs used in erectile dysfunction, G04CA: Alpha-adrenoreceptor antagonists, G04BD: Drugs used in erectile dysfunction, G04CA: Alpha-adrenoreceptor antagonists, G04BD: Drugs for trianty frequency and incontinence           H02: Corticosteroids for system use <sup>a</sup> H02AB: G10BAA: H02AA: Minerallocorticoids           M01: Antiinflammatory and antirheumatic products         M01AE: Propionids, N02AA: Natural optim alkadoids           N02: Analgesics         N02BA: Bisphosphonates, M03BB: Sulfur-containing imidazole derivatives, N03AG: Farty acid derivatives, N03AG: Farty acid derivatives, N03AG: Farty acid derivatives, N03AG: Farty acid derivatives, N03AG: Farty acid d	C03: Diuretics	C03AB: Thiazides and potassium in combination, C03CA: Sulfonamides, plain, C03DA:
C07: Beta blocking agents         C07AB: Beta blocking agents, sorteve, C07AC: Alpha and beta blocking agents, C07AA: Beta blocking agents, non-selective           C08: Calcium channels blockers         C08CA: Dibydropyrdine derivatives, C08DA: Phenylalkylamine derivatives, C08DA: Phenylalkylamine derivatives, C08DA: Correct agents, C07AA: C09AA: ACE inhibitors, Plan, C07CA: Angiotensin II antagonists, plain, C09DA: Angiotensin II antagonists and diurctics           C10: Lipid modifying agents         C10AA: HMG CoA reductase inhibitors, C10AX: Other lipid modifying agents, C10AB: Fibrates           D07: Topical dermatological Corticosteroids         D07AC: Corticosteroids, potent (group II), D07AB: Corticosteroids, moderately potent (group II), D07AD: Corticosteroids, potent (group IV)           G03: Sex hormones and modulators of the genital system         G03C: Natural and semisynthetic estrogens, plain, G03FA: Progestogens and estrogens, fixed combinations, G03FB: Progestogens and estrogens, sequential preparations           G04: Urologicals         G04BE: Drugs tour inny frequency and incontinence           H02: AC reticosteroids for system use <sup>a</sup> H02AB: Glucocorticoids, H02AA: Mineralocorticoids           H03: Antiinflammatory and antirheumatic products         M01AE: Propionic acid derivatives, M01AB: Acetic acid derivatives, non-steroids           M01: Antiinflammatory and antirheumatic products         M01AE: Norta antiinflammatory and antirheumatic agents, non-steroids           M01: Antipileptics         N02BA: Cher antiinflammatory and antirheumatic agents, N03AG: Fatty acid derivatives, N04BA: N03ABA: Cher antipileptics, N03AF: Carboxamide derivative	207 2 11 12	Aldosterone antagonists
Cols         Calcium channels blockers         Cols CA: Dihydropyridine derivatives, C08DA: Phenylalkylamine derivatives, C08DA:           C09: Agents acting on the renin-angiotensin system         CORA: A CB inhibitors, plain, COPAA: Angiotensin II antagonists, plain, C09DA:           C10: Lipid modifying agents         C10AA: HMG CoA reductase inhibitors, C10AX: Other lipid modifying agents, C10AB:           D07: Topical dermatological Corticosteroids         D07AC: Corticosteroids, potent (group III), D07AB: Corticosteroids, moderately potent (group III), D07AB: Corticosteroids, repotent (group III), D07AB: Corticosteroids, repotent (group III), D07AB: Corticosteroids, moderately potent (group III), D07AB: Corticosteroids, repotent (group III), D07AB: Corticosteroids, repotent (group III), D07AB: Corticosteroids, for System set G03CA: Natural and semisynthetic estrogens, plain, G03FA: Progestogens and estrogens, fixed combinations, G03FB: Progestogens and corticosteroids, for System uses           G04: Urologicals         C044DE: Drugs for urinary frequency and incontinence           H021: Corticosteroids for system uses         H03AA: Thyroid hormones, H03BB: Sulfur-containing imidazole derivatives, H03BA: Thiouracls           M01: Antiinflammatory and antirheumatic products         M01AX: Other antiinflammatory and antirheumatic gents, non-steroids           N022: Analgesics         N02BE: Anilds, N02AX: Other ongoinds, N02AV: Natural opium alkaloids           N03: Antiepileptics         N03AC: Other antiepileptics, N03AF: Carbosamide derivatives, N03AF: Carbosamide derivatives, N05AF: Selectives, N05AF: Selectives, N05AF: Selective serotonin reuptake inhibitors, N06AF: Corticosteroids, R04A	C07: Beta blocking agents	CU/AB: Beta blocking agents, selective, CU/AG: Alpha and beta blocking agents, CU/AA:
Const. Calefulm Channels biologers       Cook.A. Fundity Sciences, Cook A. Fundity any and the derivatives, Cook A. Fundity any and the derivatives and estrogens, fundity and the derivatives, Cook A. Fundity any and the derivatives and estrogens, fundity and the derivatives, Ho3BA: Thyroid herapy         M01A: Corticosteroids for system use <sup>4</sup> H02AB: Glucocorticoids, H02AA: Mineralocorticoids         M01A: Thyroid herapy       H03AA: Thyroid hormores, H03BB: suffur-containing imidazole derivatives, H03BA: Thiouracils         M01A: Corticosteroids for system use <sup>4</sup> M01AE: Propionic acid derivatives, M01AB: Acectic acid derivatives, H03BA: Thiouracils         M01A: Corticosteroids, H02AA: Moter and the fundation and the derivatives, M03BA: Cortico ace derivatives, M03BA: Cortico ace derivatives, M03BA: Cortico ace derivatives, M03AE: Corticosteroids         M01A: Antti-flammatory and		COSCA: Dibydropyridion doirectives COSDA: Departellydemine doirectives COSDA.
C09: Agents acting on the renin-angiotensin system         C09AA: ACE inhibitors, plain, C09CA: Angiotensin II antagonists, plain, C09DA: Angiotensin II antagonists and duretics           C10: Lipid modifying agents         C10AA: HMG CoA reductase inhibitors, C10AX: Other lipid modifying agents, C10AB: Fibrates           D07: Topical dermatological Corticosteroids         D07AC: Corticosteroids, potent (group III), D07AB: Corticosteroids, moderately potent (group II), D07AD: Corticosteroids, very potent (group IV)           G03: Sex hormones and modulators of the genital system         G03CA: Natural and semsynthetic estrogens, plain, G03FA: Progestogens and estrogens, fixed combinations, G03FB: Progestogens and estrogens, sequential preparations           G04: Urologicals         G04RE: Drugs used in creciti dysfunction, G04CA: Alpha-adrenoreceptor antagonists, G04BD: Drugs for urinary frequency and incontinence           H02: Antiinflammatory and antirheumatic products         M01AE: Propionic acid derivatives, M01AB: Acetic acid derivatives and related substances, M01AX: Other antiinflammatory and antirheumatic agents, non-steroids           M02: Analgesics         N02BE: Antide, N02AX: Other oripoinds, N02AX: Natural opium alkaloids           N03: Antiepileptics         N03AX: Other antipileptics, N03AB: Carboxanide derivatives, N03AG: Fatty acid derivatives           N04: Anti-parkinson drugs         N04BC: Dopamice agonists, N04BA: Carboxanide derivatives, N03AG: Fatty acid derivatives           N04: Anti-parkinson drugs         N04AX: Other antipileptics, N03AB: Carboxanide derivatives, N03AC: Fatty acid derivatives           N04: Anti-p	C08: Calcium channels blockers	Benzothiazenine derivatives.
CO: Agents acting on the retim anglotensin system         Souther recise motions, pain, cover it anglotices in anglotices plan, cover it anglotices plan, cover plan, cover plan, cover plan, cover plan, cover plan, cover	C09: Agents acting on the renin angiotensin system	C09AA: ACE inhibitors plain C09CA: Angiotensin II antagonists plain C09DA:
C10: Lipid modifying agents       C10AA: HMG CoA reductase inhibitors, C10AX: Other lipid modifying agents, C10AB: Fibrates         D07: Topical dermatological Corticosteroids       D07AC: Corticosteroids, potent (group III), D07AB: Corticosteroids, moderately potent (group IV)         G03: Sex hormones and modulators of the genital system       G03CA: Natural and semisynthetic estrogens, plain, G03FA: Progestogens and estrogens, fixed combinations, G03FB: Progestogens and estrogens, spain, G03FA: Progestogens and estrogens, gound comparison, G04CA: Alpha-adrenoreceptor antagonists, G04BD: Drugs used in erectile dysfunction, G04CA: Alpha-adrenoreceptor antagonists, G04BD: Drugs for timeral continence         H02: Corticosteroids for system use <sup>a</sup> H02AB: Glucocorticoids, H02AA: Mineralocorticoids         M01: Antiinflammatory and antirheumatic products       M01AE: Projonic acid derivatives, M01AB: Acetic acid derivatives, H03BA: Thiouracils         M02: Analgesics       N02BE: Anilds, N02AX: Other antiinflammatory and antirheumatic agents, N05BB: Bisphosphonates, N05BX: Other opoids, N02AA: Natural opium alkaloids         N03: Antiepileptics       N04BC: Dopamine agonists, N04BA: Dopa and dopa derivatives, N04BC: M04BC: M04BC: Dopamine agonists, N04BA: Dopa and dopa derivatives, N05CF: Benzodiazepine related drugs, N05AB: S04AE: S04AB: S04AE: S04AB: S04AE: S04AE	COP. Agents acting on the tenin-angiotensin system	Angiotensin II antagonists and diuretics
Chick Expansion         Fibrates           D07: Topical dermatological Corticosteroids         D07AC: Corticosteroids, potent (group III), D07AB: Corticosteroids, moderately potent (group II), D07AD: Corticosteroids, very potent (group IV)           G03: Sex hormones and modulators of the genital system         G03CA: Natural and semisynthetic estrogens, plain, G03FA: Progestogens and estrogens, fixed combinations, G03FB: Progestogens and estrogens, sequential preparations           G04: Urologicals         G04BE: Drugs used in erectile dysfunction, G04C: Alpha-adrenoreceptor antagonists, G04BB: Gluccoorticoids, H02AA: Mineralocorticoids           H02: Corticosteroids for system use <sup>a</sup> H02AB: Gluccoorticoids, H02AA: Mineralocorticoids           H03: Thyroid hormones, H03BB: Sulfur-containing inidazole derivatives, H03BA: Thyroid hormones, H03BB: Sulfur-containing inidazole derivatives, H03BA: Thiouracils           M01: Antiinflammatory and antirheumatic products         M01AE: Propionic acid derivatives, M01AB: Acetic acid derivatives, non-steroids           M02: Analgesics         N02BE: Anilids, N02AX: Other anticplaponates, combinations           N02: Analgesics         N03AX: Other anticplaptics, N03AP: Carboxanide derivatives, N03AG: Fatty acid derivatives, N03AC: Other anticplaptics, N04BA: Dopa and dopa derivatives, N05AH: Diazepines, Oxazepines, dinazepines and oxepines           N04: Anti-parkinson drugs         N04E: Dopamine agonists, N04BA: Other anticplaptics, N04BD: Monoamine oxidase B inhibitors	C10: Lipid modifying agents	C10AA: HMG CoA reductase inhibitors. C10AX: Other lipid modifying agents. C10AB:
D07: Topical dermatological Corticosteroids         D07AC: Corticosteroids, potent (group III), D07AB: Corticosteroids, moderately potent (group IV)           G03: Sex hormones and modulators of the genital system         GO3CA: Natural and semisynthetic estrogens, plain, GO3FA: Progestogens and estrogens, fixed combinations, GO3FB: Progestogens and estrogens, sequential preparations           G04: Urologicals         GO4BD: Drugs used in cercile dysfunction, GO4CA: Alpha-adrenoreceptor antagonists, GO4BD: Drugs for urinary frequency and incontinence           H02: Corticosteroids for system use <sup>a</sup> H02AB: Glucocorticoids, H02AA: Mineralocorticoids           H03: Thyroid therapy         H03AA: Thyroid hormones, H03BB: Sulfur-containing imidazole derivatives, H03BA: Thiouracils           M01: Antiinflammatory and antirheumatic products         M01AE: Propionic acid derivatives, M01AB: Acetic acid derivatives and related substances, M01SA: Other antiinflammatory and antirheumatic agents, non-steroids           N02: Analgesics         N02BA: Anilybosphonates, W03BA: Subphosphonates, W03AA: Natural opium alkaloids           N03: Antiepileptics         N03AX: Other antiepileptics, N03AF: Carboxamide derivatives, N03AG: Fatty acid derivatives           N04: Anti-parkinson drugs         N04BC: Dopamine agonists, N04BA: Dopa and dopa derivatives, N05AH: Diazepines, oxazepines, Hnazepines and oxepines           N06: Psychoanaleptics         N05AA: Noter antiepileptics, N03AA: Other antiepileptics, N04AB: Selective serotonin reuptake inhibitors, N06AA: Nortanis, N04AB: Selective serotonin reuptake inhibitors, N06AA: Nortanis, N04AB: Selective serotonin reuptake inhibitors,	Gro. Expla mourying agents	Fibrates
(group II), D07AD: Corticosteroids, very potent (group IV)G03: Sex hormones and modulators of the genital systemG03CA: Natural and semisynthetic estrogens, plain, G03FA: Progestogens and estrogens, squeed combinations, G03FB: Progestogens and estrogens, squeenial preparationsG04: UrologicalsG04BE: Drugs used in erectile dysfunction, G04CA: Alpha-adrenoreceptor antagonists, G04BD: Drugs for urinary frequency and incontinenceH02: Corticosteroids for system use <sup>a</sup> H02AB: Glucocorticoids, H02AA: MineralocorticoidsH03: Thyroid therapyH03AA: Thyroid hormones, H03BB: Sulfur-containing imidazole derivatives, H03BA: ThiouracilsM01: Antiinflammatory and antirheumatic productsM01AE: Propionic acid derivatives, M01AB: Acetic acid derivatives and related substances, M05B: Drugs for treatment of bone diseasesM05: Drugs for treatment of bone diseasesM03BA: Bisphosphonates, M05BX: Other drugs affecting bone structure and mineralization, M05BB: Bisphosphonates, combinationsN02: AnalgesicsN02BE: Anilisk, N02AX: Other optiods, N02AA: Natural optium alkaloidsN03: AntiepilepticsN03AX: Other antiepileptics, N03AF: Carboxamide derivatives, N04BD: Monoamine oxidase B inhibitorsN06: PsychoalepticsN05CF: Benzodiazepine related drugs, N05BA: Benzodiazepine derivatives , N05AH: Diazepines, N06AA: Non-selective monoamine reuptake inhibitors, N06AB: Selective sectonin reuptake inhibitors, N06AA: Non-selective monoamine reuptake inhibitors, N06AA: Non-selective monoamine reuptake inhibitors, N06AB: Selective sectonin reuptake inhibitors, N06AA: Non-selective bar2-adrenoreceptor agonists, R03AK: Adrenergics in combinationN04: Anti-parkinson drugsN06AA: Non-selective beta-2-adrenoreceptor agonists, R03AK: Adrenergics in combinationN06: Psychoalep	D07: Topical dermatological Corticosteroids	D07AC: Corticosteroids, potent (group III), D07AB: Corticosteroids, moderately potent
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fixed combinations, GO3FB: Progestogens and estrogens, sequential preparationsG04: UrologicalsG04BE: Drugs used in erectile dysfunction, G04CA: Alpha-adrenoreceptor antagonists, G04BD: Drugs for urinary frequency and incontinenceH02: Corticosteroids for system useaH02AB: Glucocorticoids, H02AA: MineralocorticoidsH03: Thyroid therapyH03AA: Thyroid hormones, H03BB: Sulfur-containing imidazole derivatives, H03BA: ThiouracilsM01: Antiinflammatory and antirheumatic productsM01AE: Propionic acid derivatives, M01AB: Acetic acid derivatives and related substances, M01AX: Other antiinflammatory and antirheumatic agents, non-steroidsM05: Drugs for treatment of bone diseasesM05BA: Bisphosphonates, M05BX: Other opioids, N02AA: Natural opium alkaloidsN02: AnalgesicsN02BE: Anilids, N02AX: Other opioids, N02AA: Natural opium alkaloidsN03: AntiepilepticsN03AX: Other antiepileptics, N03AF: Carboxamide derivatives, N03AG: Fatty acid derivativesN04: Anti-parkinson drugsN04BC: Dopamine agonists, N04BA: Dopa and dopa derivatives, N05AH: Diazepines, oxazepines, thiazepines and oxepinesN06: PsychoanalepticsN06AA: Non-selective monoamine reuptake inhibitors, N06AB: Selective serotonin reuptake inhibitors, N06AA: N06AA: Other antidepresantsR01: Nasal preparationsR01AD: Corticosteroids, R01AX: Other anticpleneses, R03BE: AnticholinengicsR03: Drugs for obstructive airways diseasesR06AX: Other antihistamines for systemic use, R06AD: plainR06: Antihistamines for systemic useR06AX: Other antihistamines for systemic use, R06AD: Phenothiazine derivatives, R01AA: AntiholonengicsR06: OpticalisS01AA: Antihoistamines for systemic use, R06AD: Phenothia	G03: Sex hormones and modulators of the genital system	G03CA: Natural and semisynthetic estrogens, plain, G03FA: Progestogens and estrogens,
G04: Urologicals       G04BE: Drugs used in erectile dysfunction, G04CA: Alpha-adrenoreceptor antagonists, G04BD: Drugs for urinary frequency and incontinence         H02: Corticosteroids for system used       H02AB: Glucocorticoids, H02AA: Mineralocorticoids         H03: Thyroid therapy       H03AA: Thyroid hormones, H03BB: Sulfur-containing imidazole derivatives, H03BA: Thiouracils         M01: Antiinflammatory and antirheumatic products       M01AE: Propionic acid derivatives, M01AB: Acetic acid derivatives and related substances, M01AX: Other antiinflammatory and antirheumatic agents, non-steroids         M02: Analgesics       M05BA: Bisphosphonates, M05BX: Other drugs affecting bone structure and mineralization, M05BA: Bisphosphonates, combinations         N02: Analgesics       N02BE: Anilids, N02AX: Other opioids, N02AA: Natural opium alkaloids         N03: Antiepileptics       N03AX: Other antiepileptics, N03AF: Carboxamide derivatives, N03AG: Fatty acid derivatives and derivatives and dopa derivatives, N03AG: Fatty acid derivatives         N04: Anti-parkinson drugs       N04BC: Dopamine agonists, N04BA: Dopa and dopa derivatives, N05AH: Diazepine, so azzepines, thiazepines and oxepines         N06: Psycholeptics       N05CF: Benzodiazepine related drugs, N05BA: Benzodiazepine derivatives, N05AH: Diazepine derivatives, N06AB: Selective sectonin reuptake inhibitors, N06AA: Non-selective monoamine reuptake inhibitors, N06AB: Selective sectonin reuptake inhibitors, N06AB: Selective sectonin reuptake inhibitors, N06AB: Suppathomimetics, plain         R03: Drugs for obstructive airways diseases       R01AD: Corticosteroids, R01AX: Other antidepresesants	_ ·	fixed combinations, G03FB: Progestogens and estrogens, sequential preparations
H02: Corticosteroids for system use <sup>a</sup> H02AB: Glucocorticoids, H02AA: Mineralocorticoids         H03: Thyroid therapy       H03AA: Thyroid hormones, H03BB: Sulfur-containing imidazole derivatives, H03BA: Thiouracils         M01: Antiinflammatory and antirheumatic products       M01AE: Propionic acid derivatives, M01AB: Acetic acid derivatives and related substances, M01AB: Other antiinflammatory and antirheumatic products         M05: Drugs for treatment of bone diseases       M05BA: Bisphosphonates, M05BX: Other drugs affecting bone structure and mineralization, M05BB: Bisphosphonates, combinations         N02: Analgesics       N02BE: Anilds, N02AX: Other opioids, N02AA: Natural opium alkaloids         N03: Antiepileptics       N04BC: Dopamine agonists, N04BA: Dopa and dopa derivatives, N04BD: Monoamine oxidase B inhibitors         N04: Anti-parkinson drugs       N04EC: Dopamine agonists, N04BA: Dopa and dopa derivatives, N05AF: Diazepines, oxazepines, thiazepines and oxepines         N05: Psycholeptics       N05CF: Benzodiazepine related drugs, N05BA: Benzodiazepine derivatives , N05AF: Diazepines, oxazepines, thiazepines and oxepines         N06: Psychoanaleptics       N06A: Non-selective monoamine reuptake inhibitors, N06AB: Selective serotonin reuptake inhibitors	G04: Urologicals	G04BE: Drugs used in erectile dysfunction, G04CA: Alpha-adrenoreceptor antagonists,
H02: Corticosteroids for system use <sup>a</sup> H02AB: Glucocorticoids, H02AA: Mineralocorticoids         H03: Thyroid therapy       H03AA: Thyroid hormones, H03BB: Sulfur-containing imidazole derivatives, H03BA: Thiouracils         M01: Antiinflammatory and antirheumatic products       M01AE: Propionic acid derivatives, M01AB: Acetic acid derivatives and related substances, M05BA: Other antiinflammatory and antirheumatic agents, non-steroids         M05: Drugs for treatment of bone diseases       M05BA: Bisphosphonates, Combinations         N02: Analgesics       N02BE: Anilids, N02AX: Other opioids, N02AA: Natural opium alkaloids         N03: Antiepileptics       N03AX: Other antiepileptics, N03AF: Carboxamide derivatives, N03AG: Fatty acid derivatives         N04: Anti-parkinson drugs       N04EC: Dopamine agonists, N04BA: Dopa and dopa derivatives, N04BD: Monoamine oxidase B inhibitors         N06: Psycholeptics       N05CF: Benzodiazepine related drugs, N05BA: Benzodiazepine derivatives , N05AH: Diazepines, onzepines, thiazepines and oxepines         N06: Psychoanaleptics       N06AA: Non-selective monoamine reuptake inhibitors, N06AB: Selective serotonin reuptake inhibitors, N06AA: Other antidepresants         R01: Nasal preparations       R01AD: Corticosteroids, R01AX: Other anal preparations, R01AA: Sympathomimetics, plain         R03: Drugs for obstructive airways diseases       R03AC: Selective beta-2-adrenoreceptor agonists, R03AK: Adrenergics in combination with corticosteroids or other drugs, excl. anticholinergics, R03BB: Anticholinergics         R03: Drugs for obstructive airways diseases <td></td> <td>G04BD: Drugs for urinary frequency and incontinence</td>		G04BD: Drugs for urinary frequency and incontinence
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M011: Antiinfammatory and antirneumatic products       M01AE: Other antiinflammatory and antirheumatic agents, non-steroids         M05: Drugs for treatment of bone diseases       M05BA: Bisphosphonates, M05BX: Other drugs affecting bone structure and mineralization, M05BB: Bisphosphonates, combinations         N02: Analgesics       N02AX: Other antiepileptics, N03AF: Carboxamide derivatives, N03AG: Fatty acid derivatives         N04: Anti-parkinson drugs       N04BC: Dopamine agonists, N04BA: Dopa and dopa derivatives, N04BD: Monoamine oxidase B inhibitors         N05: Psycholeptics       N05CF: Benzodiazepine related drugs, N05BA: Benzodiazepine derivatives , N05AH: Diazepines, oxazepines, thiazepines and oxepines         N06: Psychoanaleptics       N06AA: Non-selective monoamine reuptake inhibitors, N06AB: Selective serotonin reuptake inhibitors, N06AA: Other antidepressants         R01: Nasal preparations       R01AD: Corticosteroids, R01AA: Other anticepressants         R03: Drugs for obstructive airways diseases       R03AC: Selective beta-2-adrenoreceptor agonists, R03AK: Adrenergics in combination with corticosteroids or other drugs, excl. anticholinergics, R03AD: Phenothiazine derivatives         S01: Ophthalmologicals       S01AA: Antibiotics, S01AA: Other ophthalmologicals, S01CA: Corticosteroids and antiinfectives in combination		Iniouraciis M01AE: Dropionio acid devicatives M01AP: Apple acid devicatives and related substances
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N04: Anti-parkinson drugsN04BC: Dopamine agonists, N04BA: Dopa and dopa derivatives, N04BD: Monoamine oxidase B inhibitorsN05: PsycholepticsN05CF: Benzodiazepine related drugs, N05BA: Benzodiazepine derivatives , N05AH: Diazepines, oxazepines, thiazepines and oxepinesN06: PsychoanalepticsN06AA: Non-selective monoamine reuptake inhibitors, N06AB: Selective serotonin reuptake inhibitors, N06AX: Other antidepressantsR01: Nasal preparationsR01AD: Corticosteroids, R01AX: Other nasal preparations, R01AA: Sympathomimetics, plainR03: Drugs for obstructive airways diseasesR03AC: Selective beta-2-adrenoreceptor agonists, R03AK: Adrenergics in combination with corticosteroids or other drugs, excl. anticholinergics, R03BB: AnticholinergicsR06: Antihistamines for systemic useR06AX: Other antihistamines for systemic use, R06AE: Piperazine derivatives, R06AD: Phenothiazine derivativesS01: OphthalmologicalsS01AA: Antibiotics, S01XA: Other ophthalmologicals, S01CA: Corticosteroids and antiinfectives in combination	1 (osti i indepilepileo	derivatives
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9 <sup>a</sup> Only two drug classes