

Synopsys

As in other countries, there are a large number of patients in Japan suffering from chronic diseases such as hypertension, diabetes, osteoporosis, and dyslipidemia. These conditions share some common traits: patients are elderly and seen by office-based internists (GPs). With conventional market research techniques, it has often been quite complicated to understand the elderly segment due to the lack of direct access to such patients (little participation in market research), and due to the overlapping diseases in one patient (physician research often focuses on one disease).

Objectives

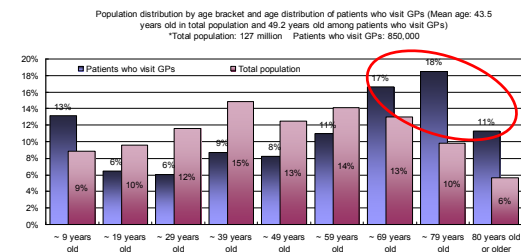
By using a large-scale electric prescription database, we would like to attempt to explore the elderly segment regarding issues such as:
 * How many and from what other diseases does a patient suffer?
 * What prescription medications are used?
 * What are the medical expenses for a disease, and diseases?

A deeper pre-understanding of the market based on large-scale Rx data allows market researchers to conduct primary research with questions of a different kind.

e-PT is a database of patients who were seen by GPs at 1,000 clinics/offices (19 or fewer beds) sampled throughout the country. This report will be on "outpatient treatment of elderly patients by GPs" as per the results from the e-PT analysis.

Age distribution of patients who visit physicians

Japan's total population is about 127 million and the mean age is 43.5. The number of patients who visit the facilities targeted by e-PT is 850,000 and their mean age is 49.2. A comparison of the age distribution among Japanese and age distribution of patients who see GPs does not show any significant differences in the mean age, but it does indicate a relatively large percentage of elderly patients visit GPs. Roughly 30% of patients who visit the GPs are elderly who are 70 years old or older. The largest age bracket in the total population is the 30s and in the population of patients who visit the GPs is 70s. Actually, 30% of the patients who visit the GPs are 70 years old or older. Adding the percentage of the patients 60 years old or older, it represents half of all those who visit the GPs.

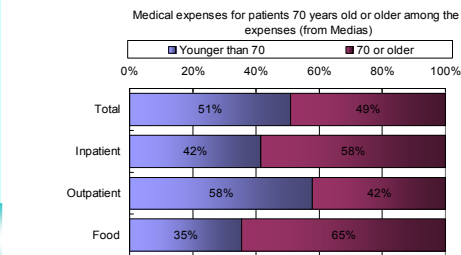


Where do patients visit?

According to MEDIAS (a database of medical expense estimation) reported by MHLW, 85 million claims for reimbursement for consultations were made in June 2009. Eighty-three million of these were made for outpatients. There are 8,800 hospitals (with 20 or more beds) in Japan. There are 84,000 GP facilities (with fewer than 19 beds), and 70% of outpatients visit these GP facilities.

Medical expenses for the elderly

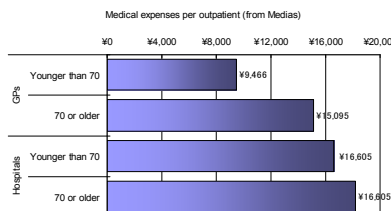
The total monetary figure for the 85 million claims was 3 trillion yen. Forty-nine percent (1.5 trillion yen) of this was spent on elderly patients who are 70 years old or older. Analyzing only outpatient, however, this figure shrunk to 42%. One of the reasons for this is that the drug costs taking up a large portion of costs in outpatient have been compacted.



Based on the total medical expense, the costs per patient in inpatient/outpatient for: Outpatients were 13,000 yen; Inpatients were 440,000 yen.

Medical expenses for elderly outpatients

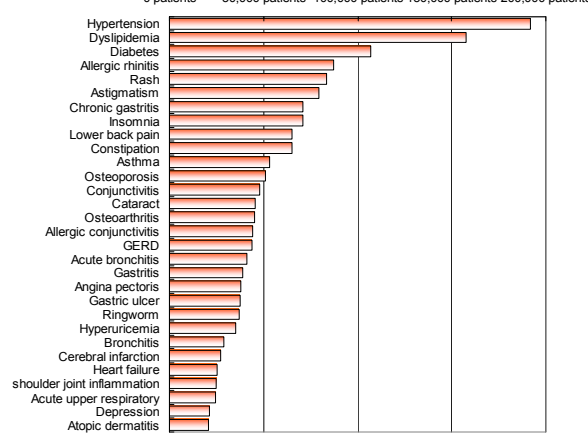
While the number of patients who see GPs is large, the mean medical expense per patient among all of these patients is 13,000 yen. On an age-bracket basis, the mean among patients younger than 70 years old is 9,500 yen and those 70 years old or older, 15,000 yen.



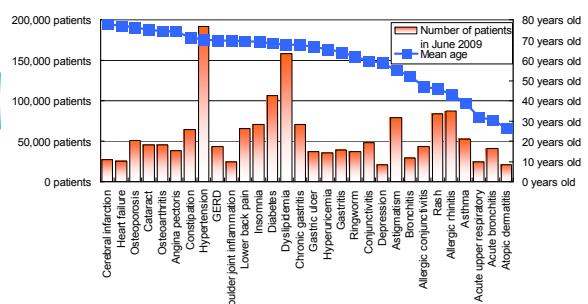
Conditions patients have when they visit a GP

The most common condition presented by 850,000 diagnosed patients who have visited a GP is hypertension (190,000 patients). This is followed by dyslipidemia (160,000). This is subsequently followed by diabetes, as an overwhelmingly large percentage of patients receive a diagnosis of a lifestyle-related disease. Patient diagnosis This suggests that elderly patients suffer from more than one condition. The most common diagnosis of patients who have seen a GP is hypertension (190,000 patients). This is followed by dyslipidemia and diabetes. All of these are lifestyle-related diseases and very common diagnoses among elderly people. Analysis in terms of the mean age of patients indicates that the mean age of patients was highest among those diagnosed with cerebral infarct and heart failure, and even was over 70 among those with hypertension.

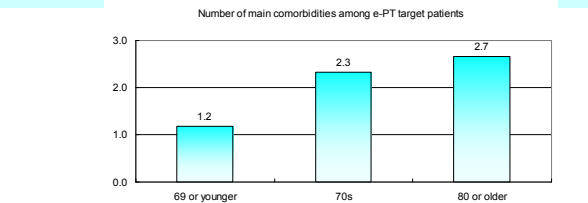
e-PT June 2009: Common diagnoses of patients visiting GPs (TOP 30)



e-PT June 2009: Mean patient age by common diagnosis among patients visiting GPs (TOP30)

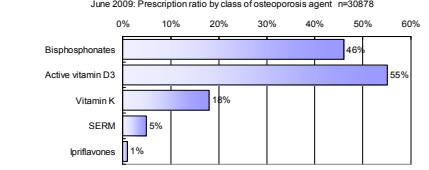
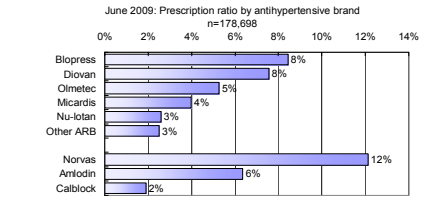
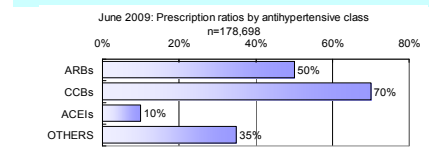


■ Patient diagnoses (number of comorbidities)
 Analysis by age indicates that patients younger than 70 suffer from 1.2 comorbidities/person. This same figure is 2.3 for those in their 70s and 2.7 for those 80 or older.
 (*Mean number of comorbidities based on the top 30 diagnoses shown in the graph)
 The medical expenses per outpatient change significantly at 70 years of age, probably indicating that patients 70 years old or older suffer from more than one condition.



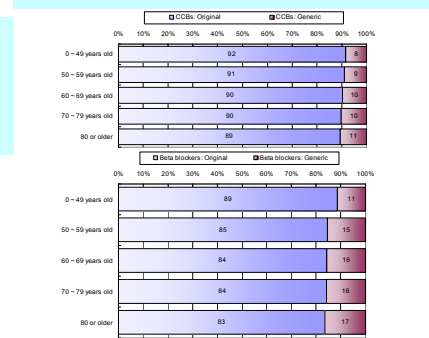
Current prescribing

The most commonly prescribed type of antihypertensive for hypertension is CCBs (70%). The most commonly prescribed brand is Norvasc. Fifty percent of the patients are prescribed an ARB, with Biopress the most commonly prescribed brand. With regard to osteoporosis, 55% get Vitamin D3 preparations, 46% are prescribed bisphosphonates and 18%, SERM.



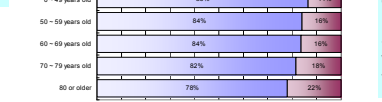
Generic Rx by patient age

Amidst the current environment characterized by switches to generics, the percentages of patients prescribed originals and generics were compared by age bracket using antihypertensive agents and dyslipidemia agents, for example. A relatively large percentage of patients are prescribed generic ACE inhibitors, though the absolute number prescribed is small. Between 8 and 11% of patients are prescribed generics of CCB, which is the main class of antihypertensive, depending on the age bracket. With regard to statins, the older the patient, the more pronounced the use of generics.

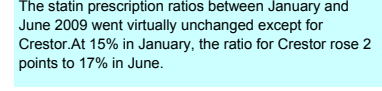


Current prescribing of brand statins to elderly patients

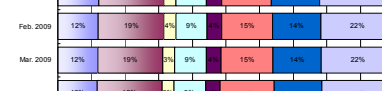
The statin prescription ratios between January and June 2009 went virtually unchanged except for Crestor. At 15% in January, the ratio for Crestor rose 2 points to 17% in June.



Changes in prescribing based on January 2009 (Lipitor)



Changes in prescribing based on January 2009 (generic statins)



Changes in prescribing based on January 2009 (Crestor)



Findings & Discussion

Medical expenses run over 3 trillion yen per month, with those for the elderly ballooning in particular. The percentage of expenses on elderly patients among the total is not only high with regard to inpatient care, but also outpatient. With the recent and successive launches of blockbuster generics, the switch to generics has been progressing in order to cut medical expenses. This is particularly evident in regard to elderly patients. The results from the e-PT analysis show a drastic increase in the number of comorbidities suffered when patients become 70 years old or older. The prescribing of drugs to elderly patients must be done in the most appropriate manner, all the while carefully monitoring the situation with regard to comorbidities. Accordingly, mild drugs are considered the 1st-line when physicians newly prescribe a drug, though it depends on the condition of the patient. Unless an insufficient level of efficacy is evident, few physicians readily switch from the drug used to date to a different drug. As such, once physicians prescribe a drug that is for long-term use, they very rarely switch it. Therefore, obtaining "new prescriptions" and "switches" is an important issue for pharmaceutical companies, and they often have problems with getting original drugs prescribed to elderly patients. Amidst such an environment, the number of Crestor (a dyslipidemia agent) prescriptions is increasing not only among younger patients, but also among elderly patients in their 70s or 80s. And, this growth exceeds that of Lipitor, another strong statin, so should garner attention with regard to future growth in the market. The e-PT database allows for counting the number of prescriptions per brand, based on the data on current prescribing of drugs per patient visit, which is accumulated in the GP's (reimbursement claim) receipt computers. It also enables one to ascertain the changes in prescribing, i.e., new prescriptions, switches, and add-ons, gauge how long a patient will continue on a certain prescription, and identify the brand strengths and weaknesses of the respective brands.

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