Report of the International Committee of The Federation of
Japan Pharmaceutical Wholesalers Association

International Comparison of Pharmaceutical Wholesalers' Function-Specific Costs

April 2011

The Federation of
Japan Pharmaceutical Wholesalers Association

Preface

The question of "whether the costs of pharmaceutical wholesaling in Japan are reasonable for the quality and quantities of the functions being fulfilled" has been raised by medical institutions and pharmaceutical companies in Japan.

Japan's pharmaceutical wholesalers meet the needs of 160,000 medical institutions and dispensing pharmacies, the largest number in the world, and they fulfill a wide variety of functions. More specifically, pharmaceutical wholesalers' MSs (Marketing Specialists) are engaged in a wide variety of duties, from order processing and delivery to sales promotion activities with a focus on providing drug information in addition, to consulting on management and credit issues of medical institutions. Thus, evaluating the costs and performance related to these functions would be a difficult task, and for that reason no systematic attempts have ever been made to evaluate them.

However, the environment surrounding pharmaceutical wholesalers has undergone dramatic changes. In terms of drug discovery and development, the drugs being developed and launched on the market today have become specialized and diversified as a result of advances in science and advanced formulation technologies. Drug diversification implies diversified requirements of pharmaceutical wholesalers by pharmaceutical companies. Therefore, the wholesalers' functions that pharmaceutical companies wish to utilize and their costs now differ greatly from company to company. In terms of distribution, on the other hand, an enormous dispensing pharmacy market that accounts for more than 50% of the prescription drug market in Japan has been formed as a result of the government's programs to promote separation of prescribing and dispensing, and the number of prescriptions for generic drugs has gradually been increasing. In the face of this situation pharmaceutical wholesalers have been actively merging, have realized full lineups of pharmaceutical products, and have made their distribution operations more efficient and improved their functions in order to enhance the value of their presence in society.

In April 2010, the medical fee reimbursement rates were revised for the first time under a Democratic Party of Japan (DPJ) administration. Against the background of the Party's manifestos, which included "Revitalization of health care and nursing care", for the first time in a decade the revision has resulted in increase in reimbursement rates. However, the increase in reimbursement rate of 0.19% was extremely small, reflecting the state of the Japanese economy, and the financial status of medical institutions remains harsh. In addition, for the first time in the 60-year history of the public drug pricing system in Japan the trial implementation of the "premium for promotion of new drug creation and resolution of unapproved

drugs/indications" in April 2010 resulted in the revision of the reimbursement prices of drugs during the term of their patent under certain conditions. On the surface, the environment of pharmaceutical companies appears to have improved, but the spate of successive blockbuster drugs whose patent expired in 2010 or will expire soon is having a huge impact on their management, and is resulting in a difficult financial environment.

While the needs of both ends of the supply chain with pharmaceutical wholesalers in the middle have been changing in this way, the time has come for Japanese pharmaceutical wholesalers to develop activities that will encourage their functions in society and reasonableness of costs involved to be properly understood by medical institutions and pharmaceutical companies in Japan. What must be kept in mind here is that Japanese pharmaceutical wholesalers are distributors who provide special added value that is unparalleled in other countries, and that the functions they fulfill are very different in quantity and quality from the functions fulfilled by pharmaceutical wholesalers in other countries. Industrial education activities are essential to ensure that these points will be properly understood by the people involved.

This report describes contents of the functions being fulfilled by Japanese pharmaceutical wholesalers, and it compares pharmaceutical wholesalers' functions and their associated costs in Japan with the situation in Europe and the United States (US) from both qualitative and quantitative viewpoints. First, this report will present the results of a qualitative comparison between the government systems related to drugs and the functions fulfilled by pharmaceutical wholesalers in Japan, Europe, and the US, and then it will present the results of a quantitative comparison between pharmaceutical wholesalers' gross margin, their function-specific selling, general, and administrative expenses (SG&A expenses), and operating earnings. Last but not least, the impact of drug sales promotion activity, a function unique to Japanese pharmaceutical wholesalers, on prescriptions by physicians will be assessed. Final recommendations are made based on the above.

We sincerely hope that this report of the results of the Committee's investigation will help to encourage proper evaluation of the presence of pharmaceutical wholesalers and to encourage them to improve the quality of their management activities.

We would like to express our sincere gratitude to Dr. Michikazu Aoi of the Keio Business School, who provided valuable advice in regard to the compilation of this report.

1 Systems for Prescription Drugs in Japan, the

First, the systems in place for the distribution of prescription drugs in Japan, the US, and Europe will be compared. Table 1 shows the health care insurance systems and the margin allocations to wholesalers, medical institutions, and pharmacies in Japan, the US, and Europe (the United Kingdom [UK], Germany, and France).

In Japan, the reimbursement price (drug price) of a new drug is decided by the government upon application by the pharmaceutical company, and the price of the drug is revised every two years to reflect the actual market price (wholesale price) according to the results of a reimbursement price survey. For patented products whose rate of change in the actual market prices for two years is below the weighted average of the rate of change in the actual market prices of all prescription drugs, a "premium for promotion of new drug creation and resolution of unapproved drugs/indications," which adds a certain premium rate to the reimbursement price, has been implemented on a trial basis since April 2010. Pharmaceutical companies may be compelled to reduce the price of other drugs, primarily of drugs whose patent has expired. In the US, in principle, reimbursement prices are unregulated, and the reimbursement prices made by private insurers are decided through discussions with the respective payers. The prices paid by public insurance systems, such as Medicare and Medicaid, are decided through discussions with the respective local governments, and, recently, the price of many drugs has been decided on the basis of actual market prices. In Europe, the system is a combination of unregulated prices and controlled prices. Some degree of freedom is given to pharmaceutical companies in pricing new drugs (or innovative new drugs). On the other hand, there are quarterly reductions in reimbursement prices in the UK that are based on the actual market prices of generic products, and there is a reference price system in Germany and France. These systems strongly suggest that prices are largely controlled in Europe.

Next, the margin allocations to medical institutions, pharmacies, and wholesalers are determined by free competition in Japan and the US. Public margin rates are set in Germany and France, while in the UK the margin system is a combination of free competition and public margins: there is a cap on the maximum margin rate, which is calculated as the sum of the wholesaler's margin rate and the pharmacy's margin rate, on patented products, but there is no cap on generic products.

To summarize these systems, reimbursement prices and margins are unregulated in the US, while new drugs and generic products are handled differently in Europe, where innovative new drugs alone can be priced relatively freely by pharmaceutical companies. Margin allocations to pharmaceutical wholesalers, medical institutions, and pharmacies, on the other hand, are officially defined in Europe. In Japan, reimbursement prices are set by a government agency, but margin allocations are unregulated, thereby allowing free competition, which leads to a tendency toward lower sales prices. That is why a mechanism is in place in Japan to review and reduce reimbursement prices based on actual market prices.

US and Europe

[Table 1] Drug Pricing Systems and Margin Systems in Japan, the US, and Europe

	Health insurance system	Margin allocations to wholesalers, medical institutions, and pharmacies
Japan	Universal health insurance coverage	Free competition
US	Private insurance and Public insurance	Free competition
Europe (UK Germany France)	Universal health insurance coverage	Public margin/free competition **UK (England)** ● If the drug is a new drug, the maximum margin rate, i.e., the sum of the wholesaler's margin rate and the pharmacy's margin rate is restricted to 12.5% of the reimbursement price, but there is no cap for generic products. ● If the annual internal reserve of all of the pharmacies in England as a whole exceeds £ 500 million, a certain rate is deducted from the reimbursed amount. **Germany/France** ● The margin rates are officially allocated to wholesalers and pharmacies based on the prices and packaging units in each country.

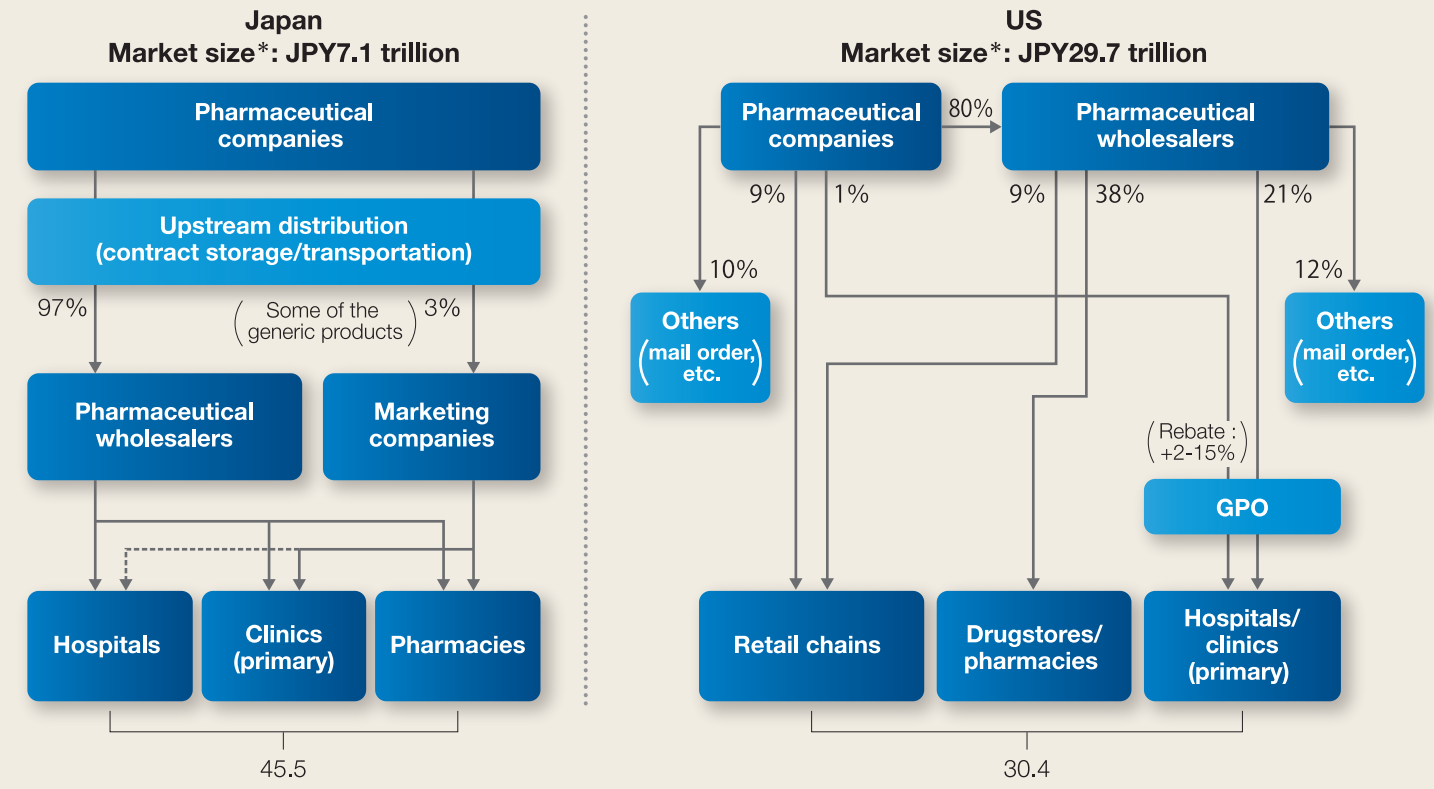
(Created by Crecon R&C)

2 Comparison of Distribution Flows in Prescri

The distribution flows in prescription drug markets in Japan, the US, and Europe were compared. Figure 1 shows the distribution flows in the prescription drug markets in Japan, the US, and Europe. The 2008 market sizes based on factory shipment prices (US$1 = JPY104.23: average of US dollar-Japanese yen exchange rates posted by the Customs Director in 2008) were JPY7.1 trillion in Japan, JPY29.7 trillion in the US, and JPY16.2 trillion in Europe (total of five countries: the UK, Germany, France, Italy, and Spain). The greatest difference between Japan, and US and Europe was the number of distribution sites. The results of the quantitative comparison will be discussed later.

In Japan, 97% of prescription drugs are distributed through wholesalers, and only a small percentage of direct sales of some generic drugs is made through marketing companies. Wholesalers distribute prescription drugs to 9,000 hospitals, 97,000 clinics (excluding dental clinics), and 51,000 pharmacies throughout Japan, i.e., to a total of 157,000 sites. In the US, 80% of prescription drugs are distributed through wholesalers, and 38% of drugs distributed through wholesalers are sold to drugstores and pharmacies, 21% to hospitals and clinics, 9% to retail chains, and 12% to others (mail orders,

[Figure 1] Distribution Flows of Prescription Drugs in Japan, the US, and Europe

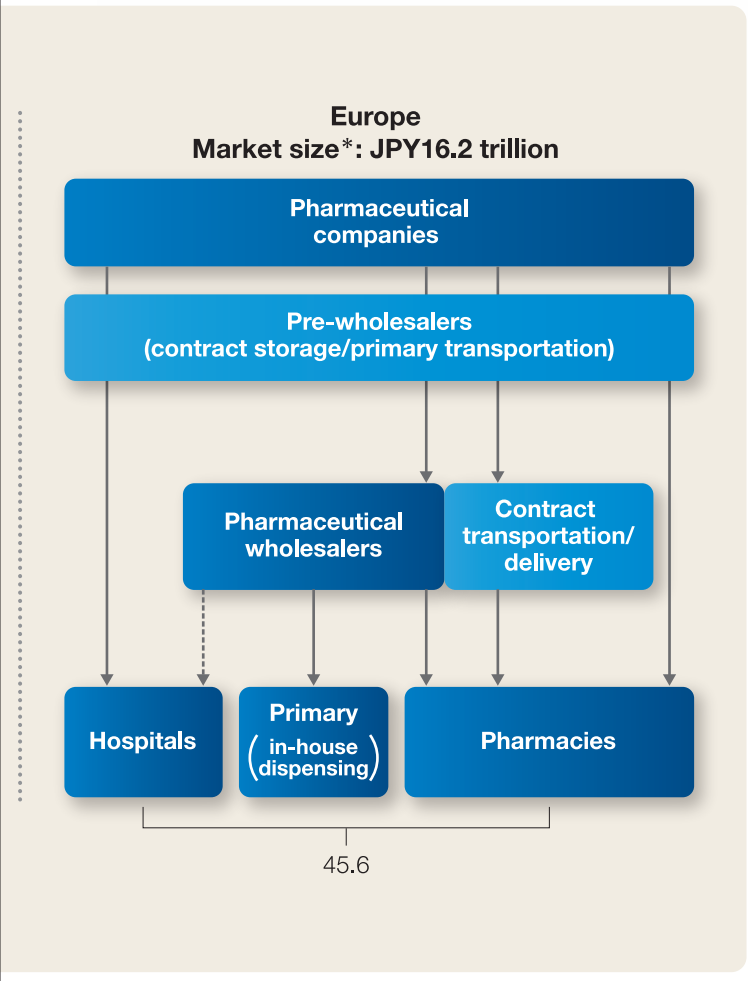


Europe refers to the UK, Germany, France, Italy, and Spain
＊Basis of factory shipment prices in 2008, USD=JPY104.23
(Average of the US dollar - Japanese yen exchange rates posted by the Customs Director in 2008)

ption Drug Markets

etc.). Wholesalers distribute prescription drugs to pharmacies, hospitals, and clinics, but the total number of distribution sites on a routine basis is about 70,000, less than the 50% of the number in Japan, and the sites include 65,000 pharmacies, and 6,000 hospitals and clinics. In Europe, the situation differs from country to country, but a major difference from Japan is that many of the drugs are sold to hospitals via direct sales by pharmaceutical companies, and wholesalers distribute drugs mainly to pharmacies.

The differences between the numbers of distribution sites on a routine basis in Japan, the US, and Europe mean large differences in the numbers of sites with which negotiations are conducted for prices and credit management. A quantitative comparison of services according to differences in the numbers of distribution sites and in the numbers of negotiating sites will be discussed in detail in "4. Quantitative Differences between Pharmaceutical Wholesalers' Services in Japan, the US, and Europe."



(Source: data from The Federation of Japan Pharmaceutical Wholesalers Association, HDMA [Reference 1], IMS Health, and Crecon R&C)

3 Qualitative Differences between Functions of in Japan, the US, and Europe

The functions performed by pharmaceutical wholesalers in Japan, the US, and Europe are compared qualitatively in Table 2.

Japanese wholesalers perform a function unique to Japan, that American and European wholesalers do not, i.e., the function of sales promotion (referred to as “promotion” below) with an emphasis on providing information on drugs, which may be a function they fulfill on behalf of pharmaceutical companies. The person who carries out this function is called a wholesaler MS (Marketing Specialist).

About 20,000 MSs promote drugs to physicians, mostly general practitioners, at about 160,000 medical institutions and collect information from these physicians on behalf of pharmaceutical companies. These MSs make about 5.3 million visits to prescribers a year* as computed (The impact of these calls on prescribing trends will be discussed in detail in “7. Impact Ratio of Promotion to Prescribers by Japanese Pharmaceutical Wholesalers”). Promotion of long-term listed products and generic products is provided along with meticulous information activities in the approximately 50,000 pharmacy market, where the right to switch to generic products has been transferred to pharmacists.

The core business of pharmaceutical wholesalers in every country is distribution. Unlike pharmaceutical wholesalers in other countries, however, Japanese pharmaceutical wholesalers fulfill the function of promotion, and by so doing perform one of the duties of pharmaceutical companies on their behalf. This qualitative difference in function needs to be fully taken into account when comparing pharmaceutical wholesalers in Japan, the US, and Europe.

*: Number of visits physicians are able to recall

Pharmaceutical Wholesalers

[Table 2] Qualitative Differences between Functions of Pharmaceutical Wholesalers in Japan, the US, and Europe

	Function	Japan	US	Europe
Distribution function	Order processing and handling	✓	✓	✓
	Procurement	✓	✓	✓
	Packing and shipping	✓	✓	✓
	Delivery	✓	✓	✓
Financial function (account management)	Price negotiations	✓	✓	✓
	Credit management/ debt collection	✓	✓	✓
Promotion function	Promotion to pharmacies	✓		
	Promotion to prescribers	✓		
Information function	Collection/ provision of safety information	✓	✓	✓
	Provision of regional prescribing/ stock information	✓	✓	✓
	Operation of order/ inventory management system	✓	✓	✓

(Created by Crecon R&C)

4 Quantitative Differences between Pharmace in Japan, the US, and Europe

In this section, an attempt will be made to make a quantitative comparison between pharmaceutical wholesalers' services in Japan, the US, and Europe based on the differences in the numbers of distribution sites described in "2. Comparison of Distribution Flows in Prescription Drug Markets" and the differences in wholesaler functions described in "3. Qualitative Differences between Functions of Pharmaceutical Wholesalers in Japan, the US, and Europe".

Figure 2 shows the numbers of distribution sites and the numbers of visits to prescribers in Japan, the US, and Europe(*) (UK, Germany, and France).

As shown in "2. Comparison of Distribution Flows in Prescription Drug Markets" and Figure 1, the number of distribution sites in Japan is more than twice the number in the US and Europe (UK, Germany, and France).

Why is the number of distribution sites in Japan so much larger? There are two main reasons.

One of the main reasons is that Japanese pharmaceutical wholesalers are responsible for distribution to all clinics and hospitals as well as to dispensing pharmacies. The separation between dispensing and prescribing functions at medical institutions is incomplete, and prescriptions for outpatients are often filled within the clinic or hospital itself. All injections are distributed to clinics by pharmaceutical wholesalers.

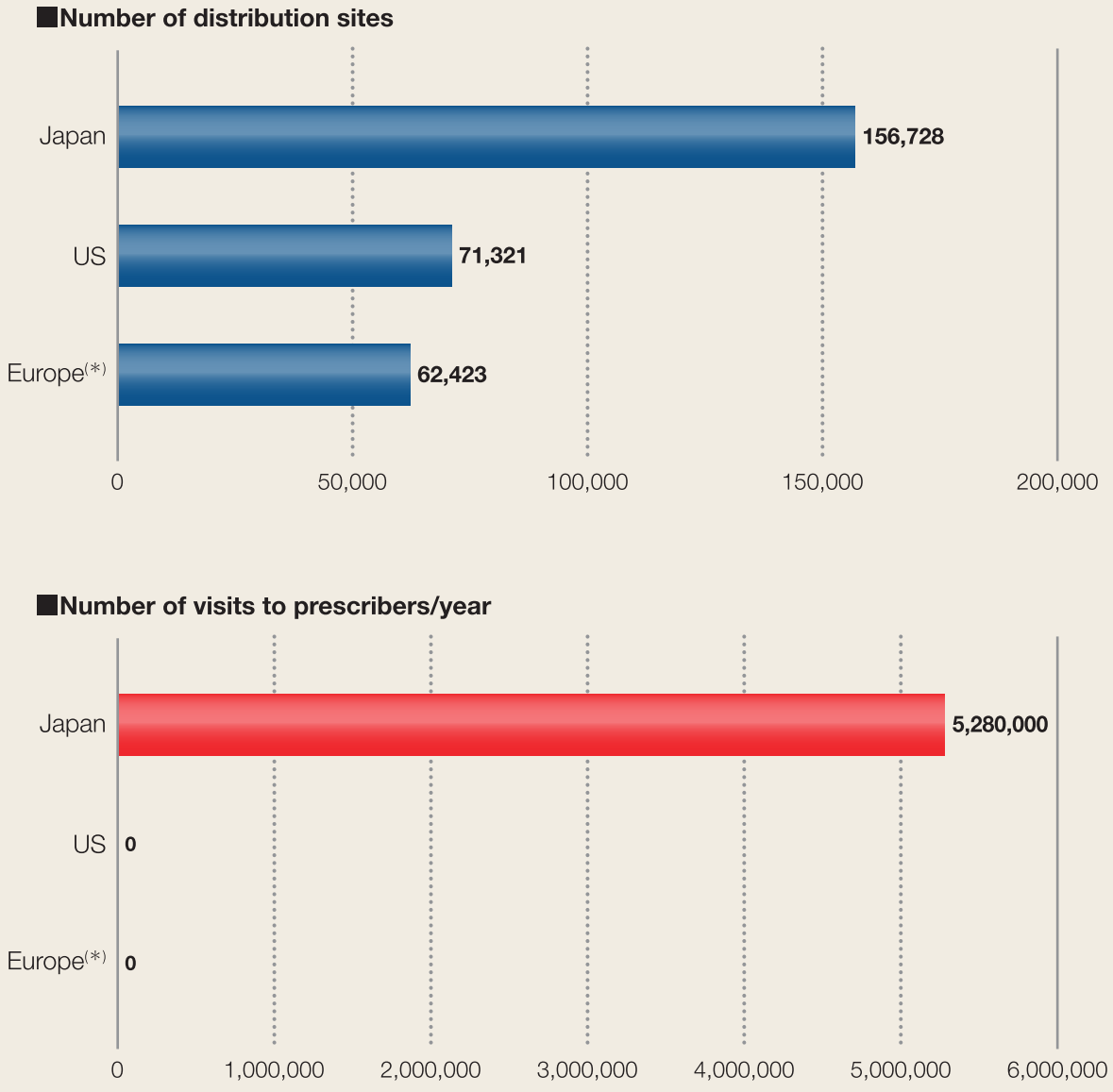
The other main reason is that there is a high degree of freedom in regard to establishing a pharmacy or clinic in Japan. A pharmacy can be established freely in Japan. The number of pharmacies per 100,000 population in 2004 was 39.9 in Japan as opposed to only 22.0 in the US, 22.8 in the UK, 25.9 in Germany, and 37.3 in France. Many gateway pharmacies have been established in front of hospitals in Japan (photograph on the right). There is a cap on the number of beds for inpatient care at hospitals in the medical plans, but only notification systems are in place to establish a clinic. Furthermore, providing patients with free access to medical institutions has also influenced the great number of medical institutions.

The average number of deliveries per site per month according to the results of research on the situation in five countries by The Federation of Japan Pharmaceutical Wholesalers Association was the highest, 78, in Germany, and the UK was next with 48. They were followed by 46 in Japan, 30 in the US, and 27 in France. Calculation of the total number of deliveries by multiplying the number of distribution sites by the number of deliveries showed that the total in Japan was 3.4 times the number in the US, 4.3 times the number in Germany, 11.8 times the number in France, and 12.4 times the number in the UK.

Next, a look at the number of negotiating sites showed that group purchasing by hospitals and chain pharmacies is less common in Japan than in other countries, making the number of negotiating sites far greater in Japan than in other countries.

Moreover, 5.3 million visits that physicians (prescribers) were able to recall are made annually by MSs as part of the promotion activities. This function is unique to Japan, and does not exist in other countries.

[Figure 2] Quantitative Differences between Pharmaceutical Wholesalers' Services in Japan, the US, and Europe



＊UK, Germany, France

(Sources of data on the number of distribution sites: MHLW data for Japan [References 2, 3], excluding data for dentists; The Federation of Japan Pharmaceutical Wholesalers Association data for the US, which are the estimated "the number of routine distribution sites" reported at the 2004 IFPW General Membership Meeting, not the current total number of distribution sites; The Institute for Health Economics and Policy data [References 4 to 6] and Reference 7 for Europe.
Source of data on the number of visits to prescribers: data obtained in a survey conducted by Crecon R&C)

5 International Comparisons between Gross

A suggestion has been made that selling, general, and administrative expenses (referred to as "SG&A expenses" below) as a percentage of pharmaceutical wholesalers' sales volume are higher in Japan than in other countries and that there is still room for further savings. Past discussions about this suggestion did not take differences in reimbursement prices according to the country into consideration. In this section, the comparison is focused on the amount of pharmaceutical wholesalers' gross margin by the method described below, rather than as a percentage of sales on their financial statements.

First, 13 products that are comparable in terms of dosage/package unit (Diovan, Lipitor, Crestor, Zetia, Aricept, Pariet, Actos, Remicade, Enbrel, Plavix, Glivec, Zyprexa, Singulair) were selected from the top-selling products worldwide. The prices of these products were calculated in relation to the prices in Japan based on the IMS Health price data for 2008 in US dollars, with the reimbursement price of each drug in Japan set equal to 100 to facilitate comparisons. When the average reimbursement price of all 13 drugs as a whole was set equal to 100 in Japan, the average price of the 13 products was 269.1 in the US and 155.1 in Europe(*) (weighted average of drug sales in the UK, Germany, and France in 2008).

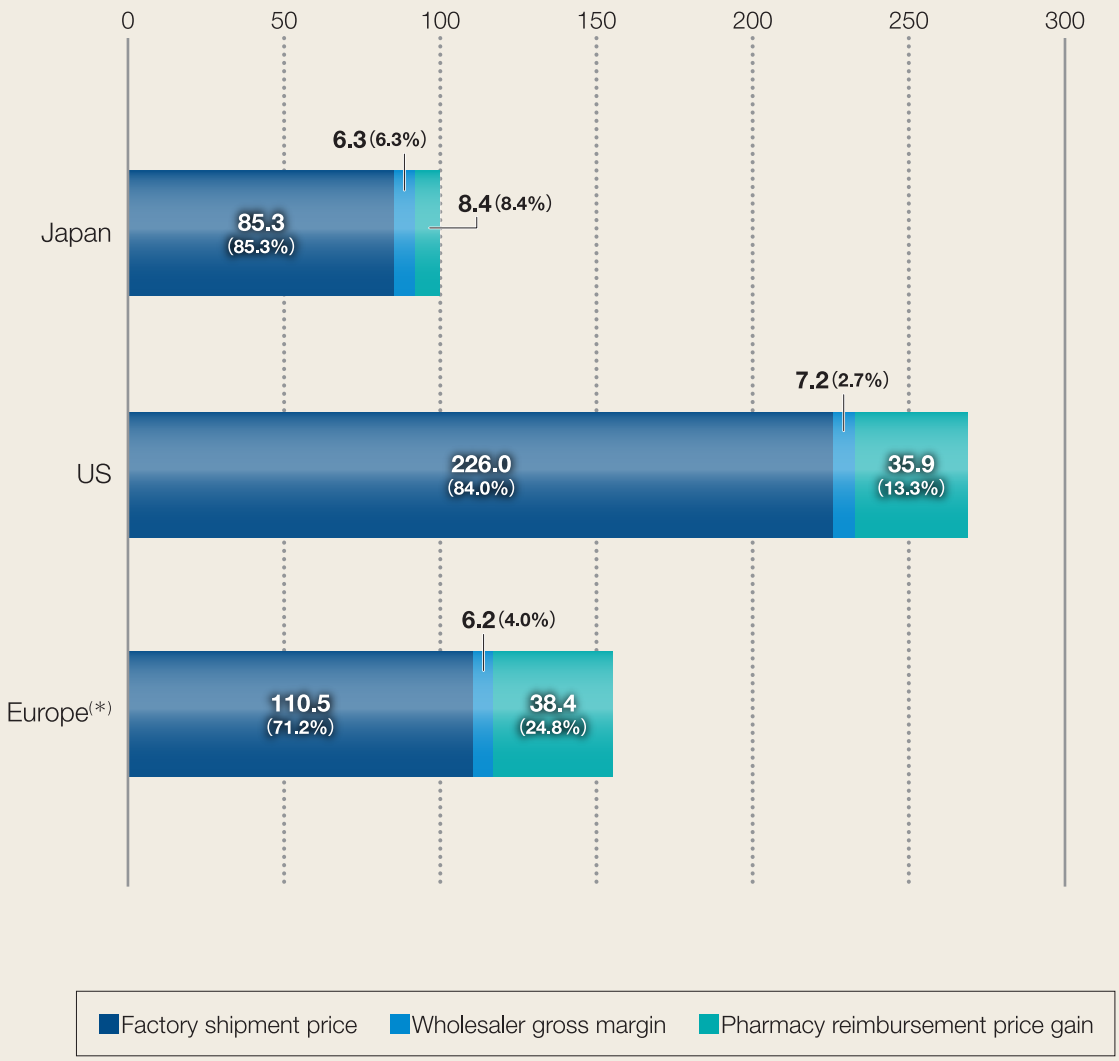
Next, the price in each country was broken down into three components: the pharmaceutical company's factory shipment price, the pharmaceutical wholesaler's gross margin, and the pharmacy's reimbursement price gain. The results are shown in Figure 3. The breakdowns were made on the basis of the wholesaler management data compiled by Crecon Research & Consulting for Japan, the HDMA (Healthcare Distribution Management Association) data (Reference 1) for the US, and the data obtained in a survey conducted by the Institute for Health Economics and Policy (Reference 8) and the data compiled by the OECD (Organization for Economic Co-operation and Development) (Reference 9) for Europe(*). The results showed that when the reimbursement price in Japan was set equal to 100, the gross margin as a proportion of the reimbursement price was 6.3 in Japan, 7.2 in the US, and 6.2 in Europe(*). In view of the difference in the number of distribution sites shown in Figure 2, the cost of the functions performed by Japanese wholesalers is surprisingly low.

The above data clearly show that, although the gross margin rate of Japanese pharmaceutical wholesalers on their financial statements is higher than in other countries, the Japanese wholesalers' gross margin when "selling one product" is never higher than it is in other countries.

The issue that needs to be resolved here is whether the reimbursement prices in each country reflect commodity prices, because if the commodity prices in a country are generally high, costs and gross margins should both be higher. Based on the differences between domestic and foreign prices, i.e., the gaps between the prices of commodities purchased domestically and abroad calculated at the currency rate at the time of the survey, published by the OECD in November 2009, when the price in Japan was used as the standard and set equal to 1.00, the price was 0.72 in the US, 0.79 in the UK, 0.93 in Germany, and 0.98 in France, demonstrating that the prices in Japan were the highest in the five countries. It can therefore be concluded that the reimbursement prices used in this section are not a direct reflection of commodity prices in these countries. The lower reimbursement prices in Japan than in these other countries are inferred to be related to the mechanism by which free competition reduces margins and reimbursement prices.

Margins of Pharmaceutical Wholesalers

[Figure 3] Price structure with the reimbursement price in Japan set equal to 100
(( ): Component ratio of the reimbursement price in each country)



*UK, Germany, France

(Source: data from IMS Health, Crecon R&C, HDMA [Reference 1], the Institute for Health Economics and Policy [Reference 8], and the OECD [Reference 9])

6 Comparisons between Function-specific S Pharmaceutical Wholesalers in Japan, the

In “5. International Comparisons between Gross Margins of Pharmaceutical Wholesalers”, reimbursement prices and wholesaler’s gross margins, etc., in the various countries were calculated as proportions of the reimbursement price in Japan, which was set equal to 100. In this section, those values will be used to compare function-specific SG&A expenses and operating earnings out of the wholesaler’s gross margin in the various countries, with the Japanese wholesale price set equal to 100. In Figure 3, the reimbursement price in Japan was set equal to 100 in order to compare profit allocation to respective sections of distribution, whereas here the wholesale price in Japan will be set equal to 100, because the purpose of this section is to compare wholesalers’ function-specific costs. The results showed that the gross margin as a proportion of the wholesale price amounted to 6.9 in Japan, 7.9 in the US, and 6.8 in Europe(*). Wholesalers’ financial statements and their replies to a questionnaire survey in each country enabled the operating earnings to be calculated at 0.3 in Japan, 2.0 in the US, and 1.4 in Europe(*).

Furthermore, the remaining SG&A expenses are allocated to five functions. To assess the allocation of SG&A expenses according to function, wholesalers were requested to calculate the percentages of five of their functions, i.e., distribution center functions (including order processing and handling, procurement, and packing and shipping), delivery, account management, promotion to prescribers, and other general expenses, under the managerial accounting system, and the results were used for Japan and Europe(*). The Reports announced by HDMA in 2008 were used for the US. The results are summarized and shown in Figure 4-1.

First, comparison of the costs for distribution and delivery revealed the highest percentage, 4.4%, in Europe(*) (2.5% for distribution plus 1.9% for delivery), which was followed by 3.8% in the US (3.0% for distribution plus 0.8% for delivery) and 3.0% in Japan. The results for Europe(*) seem to reflect the great number of deliveries per site per month as discussed in “4. Quantitative Differences between Pharmaceutical Wholesalers’ Services in Japan, the US, and Europe.”

The cost for account management was 1.4% in Japan, and larger than in any of the other countries. It is inferred that the differences in account management costs are in direct proportion to the differences in the numbers of negotiating sites.

▌Discussions of the comparison in Figure 4-1 can be summarized as follows:

❶The function related to distribution may be more efficient in Japan than in Europe and the US. (it may have been underestimated.)

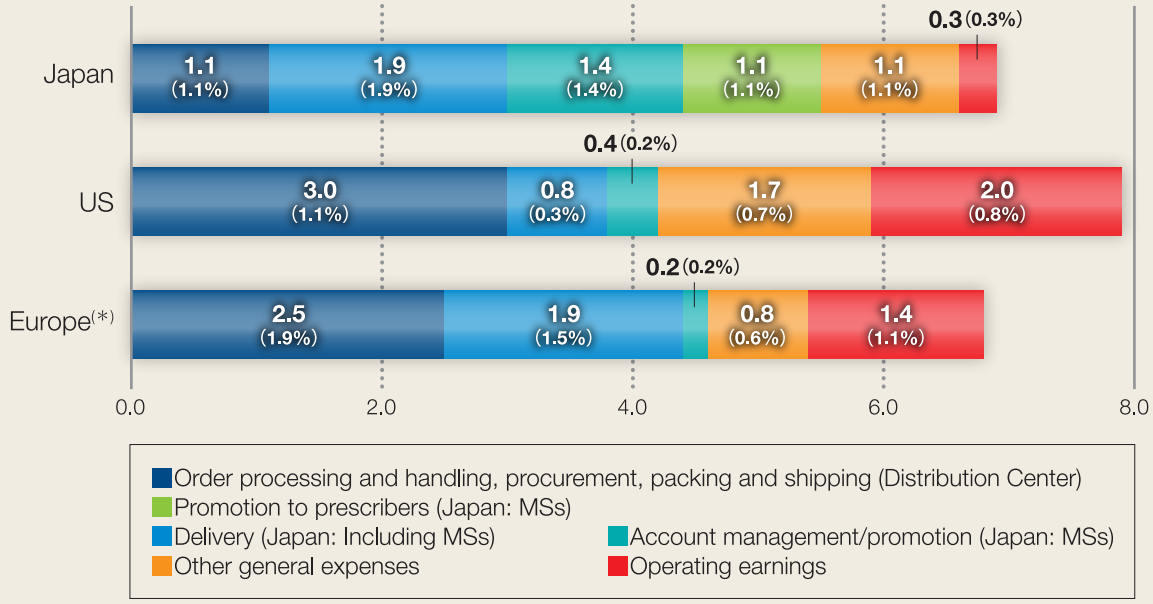
❷The cost of account management is larger in Japan than in Europe and the US, but not high taking into account the number of negotiating sites.

❸The other general costs include the costs of the functions of a medical information department at the head office. For further cost evaluation, those costs have to be shifted to the cost of other function.

As stated above, promotion to prescribers is a function unique to Japan, and the comparisons in Figure 4-2 were made exclusive of this unique function. As shown in Figure 2, there are large numbers of distribution sites and negotiating sites in Japan, and as a result, the SG&A expenses for selling one product in Japan are not very large when compared internationally.

G&A Expenses and Operating Earnings of US, and Europe

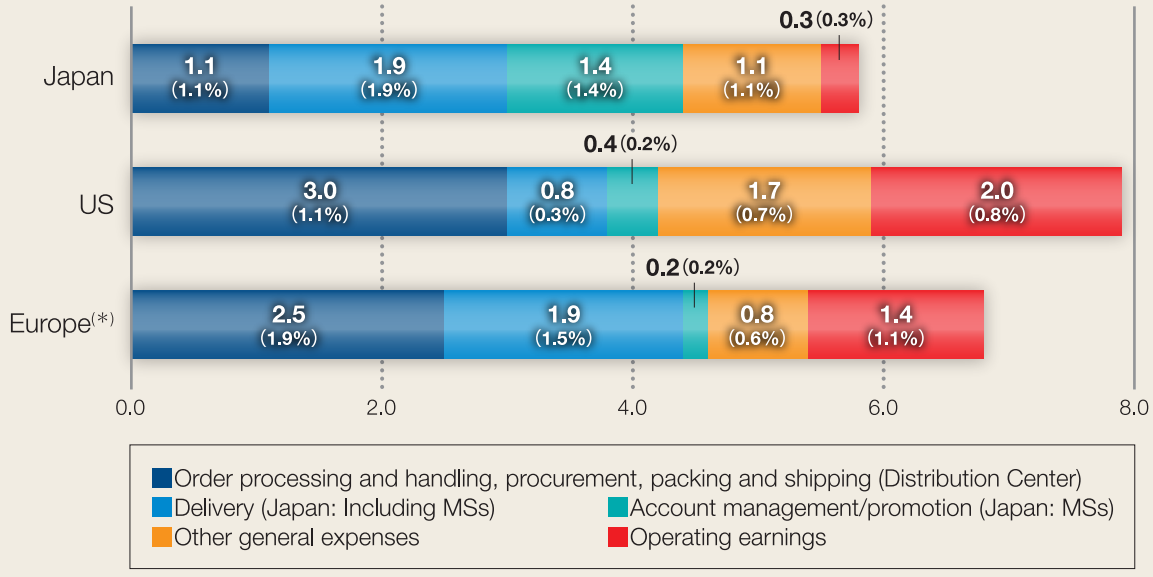
[Figure 4-1] Function-specific SG&A Expenses and Operating Earnings when the Japanese pharmaceutical wholesale price is set equal to 100 (2008/2009) (( ): Component ratios of the wholesale price in each country)



*UK, Germany, France

(Source: data from The Federation of Japan Pharmaceutical Wholesalers Association, the survey of IFPW member companies conducted by The Federation of Japan Pharmaceutical Wholesalers Association, HDMA [Reference 1], IMS Health, and Crecon R&C)

[Figure 4-2] Function-specific SG&A Expenses and Operating Earnings when the Japanese pharmaceutical wholesale price is set equal to 100 (2008/2009) (Excluding promotion to prescribers) (( ): Component ratios of the wholesale price in each country)



*UK, Germany, France

(Source: data from The Federation of Japan Pharmaceutical Wholesalers Association, the survey of IFPW member companies conducted by The Federation of Japan Pharmaceutical Wholesalers Association, HDMA [Reference 1], IMS Health, and Crecon R&C)

7 Impact Ratio of Promotion to Prescribers by J

Promotion to prescribers, a function unique to Japan, has been mentioned repeatedly. How much impact does this function have on physicians' intention to prescribe, and what is the magnitude of its impact?

The survey of physicians, mainly consisting of 1,500 general practitioners conducted by Crecon Research & Consulting in May and June 2009 in regard to pharmaceutical promotion by MSs revealed that 68% of the promotion to them had some impact on their intention to prescribe. Furthermore, as shown in Figure 5, the progression from awareness of a certain drug to action (prescription) was divided into five steps (20% per step) according to the marketing AIDCA model* to determine the average impact ratio on new prescriptions by how much the impression was changed before and after MS' visit, which resulted in 20.8%, i.e., MS' visit recorded a change of about one step forward in the five steps. In other words, the results showed that physician's intent to prescribe is considerably influenced by the MS promotion approaches that are currently being used. These findings demonstrate that many MSs have gained the trust of the physicians they visit. In fact, the results of another Crecon Research & Consulting survey showed that at least 10% of the physicians responded that their trusting relationship with the MS had affected their prescriptions.

Japanese Pharmaceutical Wholesalers

[Figure 5] Difference between Physicians' Impression about a Product before and after MS Promotion

N (Total visits): 18,513　　Average impact ratio on new prescriptions**: 20.8%

Pre-visit score → / Post-visit score ↓	0 Did not know about it	1 Knew about it (Attention)	2 Was interested in it (Interest)	3 Wanted to use it (Desire)	4 Thought it was the best of all the possible choice (Conviction)	5 Prescribe it (Action)	
1 Know about it (Attention)	843 4.2%	2,476 12.4%					3,319 16.6%
2 Am interested in it (Interest)	372 1.9%	3,063 15.3%	1,014 5.1%				4,449 22.3%
3 Want to use it (Desire)	176 0.9%	1,173 5.9%	1,058 5.3%	610 3.1%			3,017 15.1%
4 Think it is the best of all the possible choices (Conviction)	14 0.1%	164 0.8%	123 0.6%	148 0.7%	210 1.1%		659 3.3%
5 Prescribed it (Action)	44 0.2%	696 3.5%	155 0.8%	154 0.8%	138 0.7%	4,970 24.9%	6,157 30.8%
	1,449 7.3%	7,572 37.9%	2,350 11.8%	912 4.6%	1,260 6.3%	4,970 24.9%	

*A consumer action process model proposed by Edward Strong in 1925. AIDCA stands for Attention, Interest, Desire, Conviction, and Action.　(Created by Crecon R&C)

**(Sum of the differences between the post-visit score and pre-visit score for each visit except pre-visit score 5) ×0.2÷Number of visits

8 Summaries and Proposals

The results of this investigation can be summarized as follows:

❶Pharmaceutical wholesalers' duties in Japan, the US, and Europe differ greatly in terms of the number of distribution sites, the number of negotiating sites, and the promotion function due to differences in the drug-related systems and differences in distribution practice between the countries.

❷Although the total number of deliveries and the number of negotiating sites in Japan are far greater than in other countries, the amount of SG&A expenses of Japanese pharmaceutical wholesalers may be low. An examination of their function-specific costs shows that the distribution costs of Japanese wholesalers are very low, and their account management costs are not high.

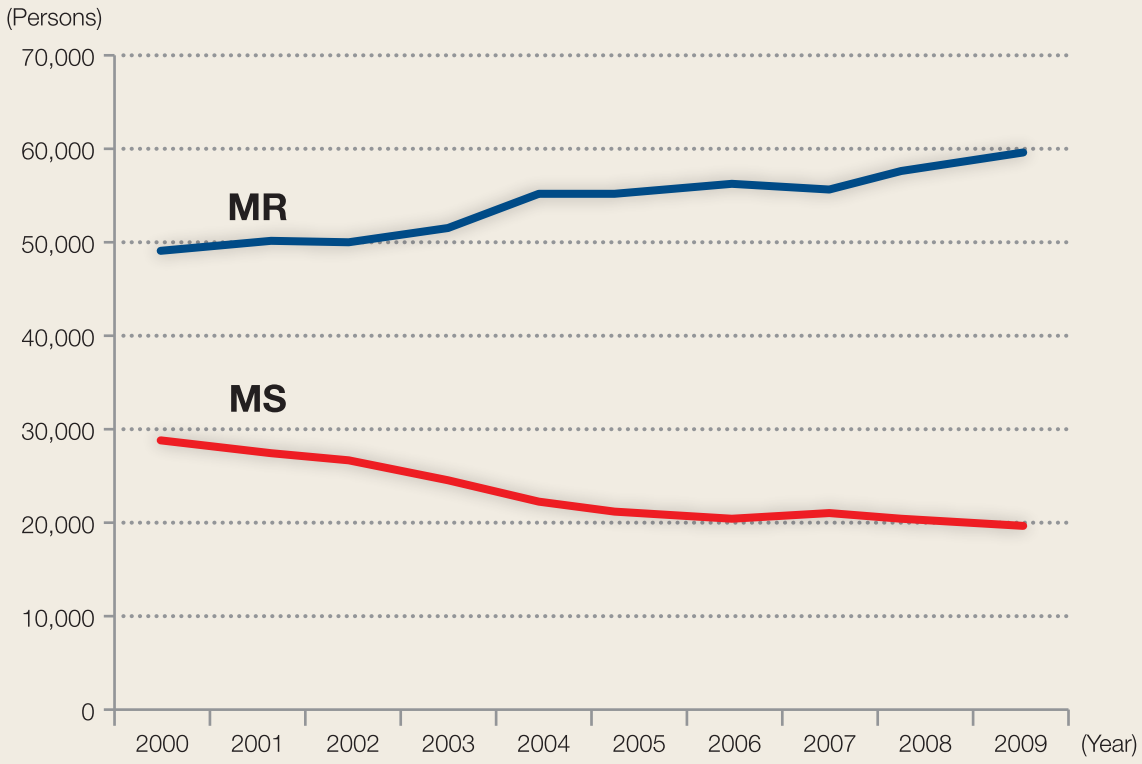
❸The promotion function of Japanese pharmaceutical wholesalers, which does not exist in other countries, is fairly effective in influencing general practitioners' decisions regarding which drugs to prescribe.

Expenditures on drugs as a percentage of GDP (2005) were found to be 1.5% in Japan, and lower than the 1.9% in the US, 1.8% in France, and 1.6% in Germany. The last decade for pharmaceutical wholesalers in Japan was the pursuit of efficiency and added values in the waves of merging. The number of companies declined to about 60% over the 10-year period, and the number of MSs, who perform the promotion function that does not exist in other countries, was cut by about 10,000 to about two thirds of their number a decade ago (see Figure 6). While this repeated merging was under way, wholesalers have diversified and made their functions more sophisticated in an attempt to become the wholesaler chosen by customers. The fact that there are almost no counterfeit drugs in the Japanese pharmaceutical distribution is extremely impressive, and it is evidence of greater safety than in other countries.

From the standpoint of social costs, the MSs of Japanese pharmaceutical wholesalers not only supplement the functions of sales representatives of pharmaceutical companies (Medical Representatives: MRs), but play the role of agents who handle the products of multiple pharmaceutical companies, and in the general practitioners' market they can be more efficient than MRs, who are specialized in the promotion of only their own company's products. MSs provide medical institutions with a variety of knowhow, including in regard to, but not limited to, inventory management, product comparison, and prescribing information in regard to other medical institutions, in support of smooth implementation of local healthcare as management consultants.

The Federation of Japan Pharmaceutical Wholesalers Association announced a "resolution" in May 2010 based on a consensus of its members. Along with "implementation of distribution reform with the aim of achieving market prices that reflect the true value of the drugs" and "continued efforts to develop and improve the crisis management distribution system that was needed during the new influenza pandemic", the resolution advocates "development of wholesale functions". The pharmaceutical industry in Japan is at a watershed because of the increase in specialty drugs and generic drugs and the trial implementation of the new drug pricing system called the "premium for promotion of new drug creation and resolution of unapproved drugs/indications". In this situation, pharmaceutical wholesalers will be dedicated to qualitative development of the functions they should fulfill to enhance their social significance of existence so that they can contribute to sophisticated and efficient healthcare.

[Figure 6] Changes in the Number of MRs and the Number of MSs



(Source: data from MR Education & Accreditation Center of Japan [Reference 10]
and The Federation of Japan Pharmaceutical Wholesalers Association)

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Investigation methods

Sections 1 to 4: Analysis based on the sources cited in the References above
Section 5: Comparison and analysis based on the IMS Health prices in US dollars in 2008
Section 6: Comparison and analysis based on wholesalers' financial statements and the replies to a questionnaire survey of IFPW member companies
Section 7: Extracted from the results of a survey of general practitioners conducted by Crecon Research & Consulting Inc. in regard to drug promotion by MSs

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Yaesuguchi Kaikan 7-20, Yaesu 1-chome, Chuo-ku, Tokyo 103-0028 Japan

Written and edited by

Crecon Research & Consulting Inc.

The Pharmaceutical Society of Japan, Nagai Memorial

12-15, Shibuya 2-chome, Shibuya-ku, Tokyo 150-0002 Japan