CURRENT SITUATION OF INSURANCE MEDICINE IN JAPAN

HIROSHI TSUKAMOTO, MD
Director & V.P., Medical Director
Meiji Mutual Life
Tokyo, Japan

The Japanese life insurance industry developed through the 1980s in a stable manner, supported by the high growth of domestic economy. The business in force including individual annuity and group insurance exceeded 1,300 trillion yen. In 1987, the United States was already replaced by Japan as the No. 1 nation by the insurance in force. Subsequently, the in-force insurance ratio of the national income and the face amount per person in Japan surpassed those of the so-called insurance advanced countries such as the United States and European countries. Accordingly, Japan emerged as the most insured nation of the world.

The Japanese life insurance industry significantly owes its steady growth to the nation's diligent and hardworking character, its strong saving orientation and the continuous decline of mortality rate with the progress of medical treatment and public health. It must be noted that the success of risk selection and classification in the insurance medicine also contributed to this development.

With reference to some features in the comprehensive life insurance industry of Japan, the writer will review the present situation of the Japanese insurance medicine, clarifying some differences from that of North America.

In Japan, there are about four hundred thousand sales agents with twenty-five private domestic life insurance companies. The majority of the sales agents are female and the Japanese sales force is also characterized by its exclusiveness to respective companies.

Insurance medicine is, in any country, an application of medical science to the insurance industry. It should not be a study for study's sake, but the pursuit of a distinctive field which combines the academic aspect with the needs of the industry. I believe that insurance medicine is involved in group medicine rather than individual, preventive medicine rather than clinical.

Based on the analysis of Dr. T. Issiki, I will remark on five domains of insurance medicine activity in Japan: medical examinations, alternative methods replacing medical examinations, medical underwriting, medical research and investigation, and medical administration.

1. Medical Examinations

The contemporary insurance industry in Japan was initiated by the foundation of Meiji Mutual Life in 1881. From its very beginning, Meiji has appointed a Chief Medical Examiner to practice medical examinations as a means of applicant risk selection and classification. The history of insurance medicine in Japan is exactly that of life insurance.

The prominent feature of the Japanese life insurance management is the company doctor system, in which a doctor is employed on a full-time basis by a life insurance company in order to play a leading role in risk selection and classification.

As of August 1989, about 870 company doctors work for private life insurance companies in Japan. All are members of the Association of Life Insurance Medicine of Japan (ALIMJA). Approximately 90% of them are active medical examiners and 10% of them are engaged in underwriting, research and investigation, and administration at the head office. In small companies, however, since the number of company doctors is limited, they usually have to deal with both jobs.

Medical examinations normally cover the following, whether they are done by company doctors or contracted medical examiners (general practitioners with individual consignment contracts as medical examiners with respective insurance companies, approximately forty thousand nationwide): verbal inquiry on the applicants' health condition including present condition and history of personal health, physical tests, blood pressure measurements and urinalysis. These are almost the same as the routine examinations practiced in North America. The basic format of the medical examination record was worked out and fixed by the Medical Committee of the Life Insurance Association of Japan (LIAJ). Therefore, the formats of each company are essentially similar.

The Japanese leading life insurance companies set the maximum face amount of new individual policies at three hundred million yen. (If one owns several policies of one specific company, the total of their face amounts is not allowed to exceed five hundred million yen). Although there are differences relating to such factors as a company's business approach, sales performance and choices available other than medical underwriting, the ratio of cases with medical examinations conducted by company doctors range from 20% to 50% of all cases requiring medical examinations.

The quality of examinations done by company doctors is much higher than those done by contracted doctors, reflecting the former's loyalty to the company. It is natural that the mortality rate associated with company doctor examinations is better than that experienced from those done by contracted doctors. Understanding these facts, many companies do not
allow contracted doctors to conduct medical examinations of cases where the face amount is more than fifty million yen; those examinations are done by company doctors.

Furthermore, in terms of service provided to large-case applicants, company doctors often pay a visit to the applicant’s house or workplace for the examination. As for contracted doctors, however, it is the applicant who comes to his clinic to take a medical examination. This aspect features the medical examination in Japanese life insurance industry.

In addition to medical examinations for large cases, company doctors are also expected to examine existing policyholders who have medical problems. And they handle re-examinations when a contracted doctor’s examination does not provide satisfactory medical information.

ECGs are usually done for large cases. (There is some difference among companies, but in general, an ECG is necessary for those cases where the face amount exceeds one hundred million yen for young applicants and fifty million yen for applicants over forty.) It is the company doctor again who performs this examination in most of the companies. Recently, a light, small-sized and portable ECG machine makes the company doctor’s visits easier. Some companies have started to use equipment which electronically records an ECG wave by IC and even analyzes the wave form by computer.

Fortunately, in Japan, the number of narcotics abusers is extremely small. The drug control measures taken by the Ministry of Health and Welfare have been successful and there is no sign at present that AIDS will prevail in an explosive manner. In these favorable circumstances we rarely resort to blood chemistry tests and HIV antibody tests for routine medical evaluation.

However, some companies have begun to require applicants for jumbo policies to take blood tests. In addition, many companies use blood tests for those with a history of medical problems such as diabetes mellitus and liver diseases. The company doctor draws blood for all these cases and examines it in a clinical laboratory.

The role of company doctors is not limited to their function as medical examiners. They also play an important part in giving instruction as specialists of insurance medicine to contracted doctors. In terms of the number of examinations, contracted doctors are dealing with several times as many as company doctors. (The ratio differs among insurance companies.)

Because of the dramatic decline in morbidity and mortality from pulmonary tuberculosis, chest X-rays are rarely obtained today in insurance medical examinations, which reduces the radiation hazard.

The examination fee for doctors under contract should be mentioned. In many cases, it is four thousand yen for office consultation and six thousand seven hundred yen for house visit.

In the present circumstances of persistently stable mortality experience with insureds, successful sales of new business every year and effective control of specific epidemics and drug addiction, relatively limited medical information has been enough for risk selection and classification of each applicant. Therefore, compared with other countries, the cost for obtaining medical information in Japan is much cheaper. It is good to be able to provide a reasonable guarantee, while keeping the insurance premium at a low level.

2. Alternative Methods Replacing Medical Examination

The sales of insurance policies without medical examination started in 1943, sixty years after the life insurance industry was established. There is no question that it was due to the shortage of medical practitioners during the Second World War. Since then, the sale of policies without medical examination has been stable so far, even after 1977 when the non-medical limit was raised to ten million yen. This is attributed to the insurance companies’ passive posture toward the raising of non-medical limits, despite mortality experience of cases without medical examination being much higher than that of cases with medical examination and their poor persistency.

In addition, from 1960, the sales policy changed from endowment oriented plans to center on products with term riders. It is natural that this shift entailed a rapid increase of medical examinations.

The number of company doctors exceeded one thousand, but the number of contracted doctors and their medical examinations increased more dramatically. At the same time, as the Japanese medical economy started to make a rapid growth, fewer medical practitioners were willing to pay a house call for insurance medical examinations. Along with the general inflation tendency prevalent at that time, there occurred a tremendous rise in the examination fee.

Under these circumstances, the life insurance industry had no other choice but to earnestly work out alternatives which could replace medical examinations.

One of the alternatives was the health certificate system which was launched in late 1950s and the other was the qualified health inspector system that was instituted in 1973. The health certificate is a means of selection indigenous to Japan. Since the days when tuberculosis was designated as one of the killer diseases in Japan, corporations and associations have been legally obligated to conduct periodical health checkups for their employees.

With the consent of a policy applicant, a person who is accountable for health management in the company issues a certificate on the basis of the results of periodical checkups including chest X-ray and blood pressure. This certificate serves as the medical examination when the applicant submits it together with his/her health statement.

Fortunately this procedure remains entrenched, because business firms adopt this system as part of the welfare programs for their employees in cooperation with life insurance compa-
nies. In addition the fee charged for a certificate is quite inexpensive (normally 1,200 yen). The mortality experience with insureds involved in this system is more favorable than that of insureds involved in any other system. Accordingly, each company is very enthusiastic about expanding this method.

The Qualified Health Inspector system was introduced into Japan in the late 1960s, it was modeled on paramedical examinations which had been instituted in North America, but this system made a unique progress here in Japan.

Unlike the situation in North America, where they depend upon paramedical staff, here the unqualified lay people are given a course and become QHIs after they succeed in the tests set by the LIAJ (Life Insurance Association of Japan). The inspector engages in a one-on-one interview with an applicant to confirm his/her health statement, makes observations and submits a medical report, which replaces the medical examination. It goes without saying that this is a method of selection without such medical information as blood pressure measurement and urinalysis.

It is almost 17 years since this method was adopted here and now most life insurance companies enjoy its benefits. As of October 1989, there were 4,250 QHIs, whose number far surpasses that of company doctors. The QHIs can handle face amounts up to forty million yen in young applicants aged up to 39, and the mortality experience from these is almost the same as, or more favorable than, that from contracted doctors. As this system of selection, however, does not have medical procedures, the mortality from cardio-cerebro-vascular diseases exceeds that of those examined by contracted doctors. As might be expected the mortality rate of insureds aged 40 or more is also higher than that from those examined by contracted doctors. It is natural that all the companies are cautious about applying a higher ceiling of face amount to the applicant aged over 40.

From the standpoint of convenience, the prospect appreciates this method because the QHI is chiefly conducted at home or worksite of the applicant. This system also benefits the companies, reducing the cost for selection. For these reasons, the system took hold in a short period of time and is now in many companies. The number of cases handled by this system far outnumber the cases handled by company doctors and contracted doctors combined. It can be said that this newest means of selection has met with success in Japan.

In the meantime, the Attending Physician's Statement which is routinely used in North America has not prevailed yet in Japan. The reasons may be the difficulty in obtaining approval from applicants and the unwillingness of medical practitioners to positively cooperate with this system.

The number of cases is still negligible but there is a growing tendency for a combination of the notice of the preventive medical checkup results (given to the applicant) and his/her health statement to replace the medical examination. This system requires less cost and the mortality experience is good.

3. Medical Underwriting

The life insurance companies in Japan use a numerical rating system for risk classification. This has been employed for many years and is similar to that used in North America. Medical directors in charge of underwriting departments have prepared underwriting manuals listing medical impairments with the appropriate numerical debits.

The reports for risk selection, including medical examination reports, are submitted directly to the underwriting and issue departments of home offices to protect the right to privacy of the applicants regarding their health condition.

As I mentioned before, in Japan risk appraisal and classification of applications are made on the basis of relatively scant information. Computerization has been introduced to make the underwriting process easier, and most leading life insurance companies are proceeding with computerization. Now there are two methods for processing applications: One requires the contents of application forms reaching the home office to be input into a computer, using numerical values from a set scale for each item, then this information is automatically collated with the fundamental items of the application forms, and finally the policies are issued by the computer. The other way is for the more complex applications to be sorted out for appraisal by underwriters or medical directors.

The results of underwriting of all examination reports, including medical examination, QHI, and health certificate, are: 95-6% are offered standard rates, 2-4% are substandard and 0.8-1.5% are declined, although these proportions vary from one company to another. Probably these figures do not differ much from those in North America.

For substandard cases, there are two principal methods of providing for the contractual conditions. One is the percentage extra premium class and the other is a coverage reduction approach similar to the lien method. The mixture of the two is also used. I do not think detailed explanations are necessary for the former, but we cover up to 450-500% risk of anticipated mortality. The latter, the coverage reduction method, is used for applicants who suffered from pulmonary tuberculosis, gastric ulcer or gallstones. Applicants seem to be psychologically willing to accept the latter form and the ratio for issued cases is close to 80%, whereas premium method results in a rather poor ratio.

Some companies adopt a temporary flat extra premium method for a fixed period instead of the coverage reduction method, but the number of cases issued this way is small. The method of rating up in age is not common in Japan.
It may reflect the present methods of gathering information for selection, but when substandard and declined applications are analyzed the major medical impairments are hypertension, stomach and liver diseases, followed by glycosuria, proteinuria and others.

No Japanese life insurance company has practiced underwriting preferred risks. I think this results from the fact that the expected mortality rate on which most Japanese life insurance companies base their premium calculation is the lowest by international standards. In other words, it means that premium is the cheapest from the policy holders' viewpoint. For some time after the Second World War premium calculation was based on the population life table. But since July 1969, all life insurance companies have used the experienced life table common to all domestic companies, which the Mortality Investigation Committee of LIAJ formulated. That life table has been revised almost every five years and the fifth Experienced Life Table used from April 2nd in 1990. For your reference I include the Table, which shows part of this life table portraying death rates by age and sex.

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>qx expectancy</th>
<th>Age (years)</th>
<th>qx expectancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0.00137</td>
<td>0</td>
<td>0.00126</td>
</tr>
<tr>
<td>10</td>
<td>0.00019</td>
<td>10</td>
<td>0.00015</td>
</tr>
<tr>
<td>20</td>
<td>0.00019</td>
<td>20</td>
<td>0.00040</td>
</tr>
<tr>
<td>30</td>
<td>0.00086</td>
<td>30</td>
<td>0.00059</td>
</tr>
<tr>
<td>40</td>
<td>0.00167</td>
<td>40</td>
<td>0.00110</td>
</tr>
<tr>
<td>50</td>
<td>0.00442</td>
<td>50</td>
<td>0.00233</td>
</tr>
<tr>
<td>60</td>
<td>0.01022</td>
<td>60</td>
<td>0.00481</td>
</tr>
<tr>
<td>70</td>
<td>0.02633</td>
<td>70</td>
<td>0.01365</td>
</tr>
<tr>
<td>80</td>
<td>0.07672</td>
<td>80</td>
<td>0.04390</td>
</tr>
</tbody>
</table>

Non-smoker discount products, which are popular in North America, are now being studied here, but none are yet on sale. The following are conceivable reasons for discouraging the introduction of the products: the smoking ratio for the entire nation is over 60%, lung cancer still ranks second of all cancers, and the mortality rate of Japanese smokers is only 1.25 times that of non-smokers.

It is needless to say that medical directors, in addition to playing a leading role in the appraisal of medical risks of submitted new business, also provide medical consultsations on insurance claim payments, hospitalization benefit payments, and other matters where a medical opinion is needed.

4. Medical Research and Investigation

The Association of Life Insurance Medicine of Japan (ALIMJA) is the sole national organization for life insurance medical studies. Founded in January of 1901, this traditional society will commemorate its 90th anniversary next year. Since as early as 1918, the Association has been approved as one of the independent academic organizations which constitute the Japan Medical Congress. Active membership of the Association comprises full-time company doctors of private life insurance companies, medical directors of the Post Office Life Insurance Bureau and the National Mutual Insurance Federation of Agricultural Cooperatives, and supporting membership is available for non-licenced people concerned with life insurance medicine and risk selection. The total membership is around one thousand.

The Association holds its annual general meeting for two days in May. Well-known scholars from outside are invited to give special lectures, but the prominent feature of the meeting is that active members are eager to present their original papers, which total 25 to 30 every year. These papers cover a wide range of themes, all of which are closely connected to the practice of life insurance so as to contribute to the further development of the industry. They are based upon data from the companies the members work for, and their studies focus on statistical epidemiology.

The Association publishes an official journal called the Journal of the Association of Life Insurance Medicine of Japan. This mainly carries papers read at the annual meeting (issued in Japanese). Summaries of these papers in English are published as "Articles Summarized" once every year.

The Association has been engaged in follow-up studies for a long time, including comprehensive analysis of the findings. These are second to none for the studies of Japanese mortality rates associated with blood pressures and body weight.

The domestic inter-company Impairment Studies have achieved great success. Members of the Association and actuarial members of the Mortality Investigation Committee of the LIAJ have been cooperating since 1968 to conduct the mortality investigation on substandard lives, five such studies and reports have been made. In 1979, they pursued the quite unusual follow-up study on the mortality of a declined group of impairments. It is noteworthy that the findings were incorporated into the book "Mortality Investigation of Declined Lives in Japan."

The non-insurance mortality work comparable to Singer and Levinson's "Medical Risks" has not yet been established in Japan, but a joint study between the Association and other study groups was initiated in 1975 to complement the insufficient LIAJ data. The following are some examples. They succeeded in finding the risk factors for circulatory disorders after they had engaged in large-scale follow-up studies of the periodical physical examinations on the employees of the now defunct Japan National Railways. They also made a splendid achievement in the follow-up studies of diabetics registered at the Center for Diabetes at the Tokyo Women's Medical College.

Let me add one more thing about the activities of the Association. ALIMJA has decided to set up the "authorized diplomat system" in order to have the ever-increasing young
members of the Association study the fundamentals of the life insurance medicine. For this purpose we utilize the invaluable experience which ALIMJA’s Board of Insurance Medicine has obtained over a long period of time. And now they are planning to publish a Text Book of Insurance Medicine as part of commemorative works for the 90th anniversary next year.

5. Medical Administration

Most of the company doctors working for life insurance companies in Japan belong to one of approximately ten District Examination Centers in major cities, or work at sales branches to do examinations within its jurisdiction. Company doctors instruct and control contracted doctors and qualified health inspectors. At the same time, they educate and guide sales agents on risk selection. They are also responsible for health management of company employees. In corporate organization, company doctors are under the supervision of medical departments at home offices. These employ clerical staff and several medical directors, who instruct and control contracted doctors and QHI, manage the medical administration and are responsible for medical studies.

Medical directors engaged in medical examinations belong to an underwriting and issue department, where examinations are processed in close connection with the medical department. It has been desirable for both Japanese and American insurance companies to have a medical director who is a specialist of insurance medicine and who is also competent in personnel management.

As is mentioned before, contracted doctors have a contract individually with a life insurance company to perform examinations. Normally, they work concurrently for several life insurance companies as contracted doctors. There has been discussion to establish a “Common Contracted Doctor System,” in which any LIAJ member companies can make use of corporate doctors who make a consignment contract with LIAJ. However, it has not been put into practice yet.

In conclusion, the following is a summary of the current situation of insurance medicine in Japan. By virtue of the company doctor system, which allows them to work on full-time basis at insurance companies, the insurance operation has been smoothly conducted. Company doctors are active in such fields as medical examination, underwriting, research and administration. Consequently they are making a significant contribution to generate a sound and reasonable gain in mortality experience. This is proven by the fact that the basic mortality rate for premium calculation has been reduced five times in the last twenty years.

In addition, medical security in Japan is covered by public social insurance, as it is called national health insurance. Therefore, private life insurance companies only provide a partial health insurance which can mainly supplement hospitalization benefit. Furthermore, medical security in Japan is not threatened by the critical issues on risk selection represented by AIDS or drug abuse.

Put under such a preferable situation, the Japanese insurance medicine may look as if its technical progress were somewhat behind. However, computer usage in examination and research has been sophisticated and clinical examination technology has been making a remarkable progress as well. These factors have established such a strong base as to guarantee a rapid development of insurance medicine in the future.

Moreover, with the aging society approaching at a faster speed than any Western society has ever experienced, insurance medicine in Japan is expected to exhibit its capability to further develop new products for nursing care, dementia and disability.