

ASIAN MEDICAL JOURNAL

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September, 1975**

CONTENTS

SPECIAL EDITION

For The 29th World Medical Assembly

Present Conditions of the Japan Medical Association

**Abstracts of Scientific Session on
"Development and Allocation of Medical Care Resources"
in the 29th World Medical Assembly, Tokyo, 1975**

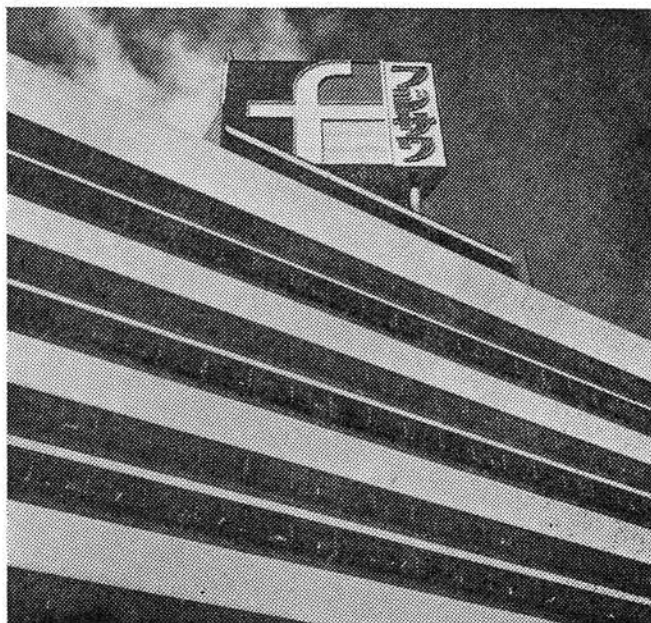
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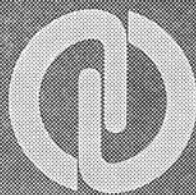
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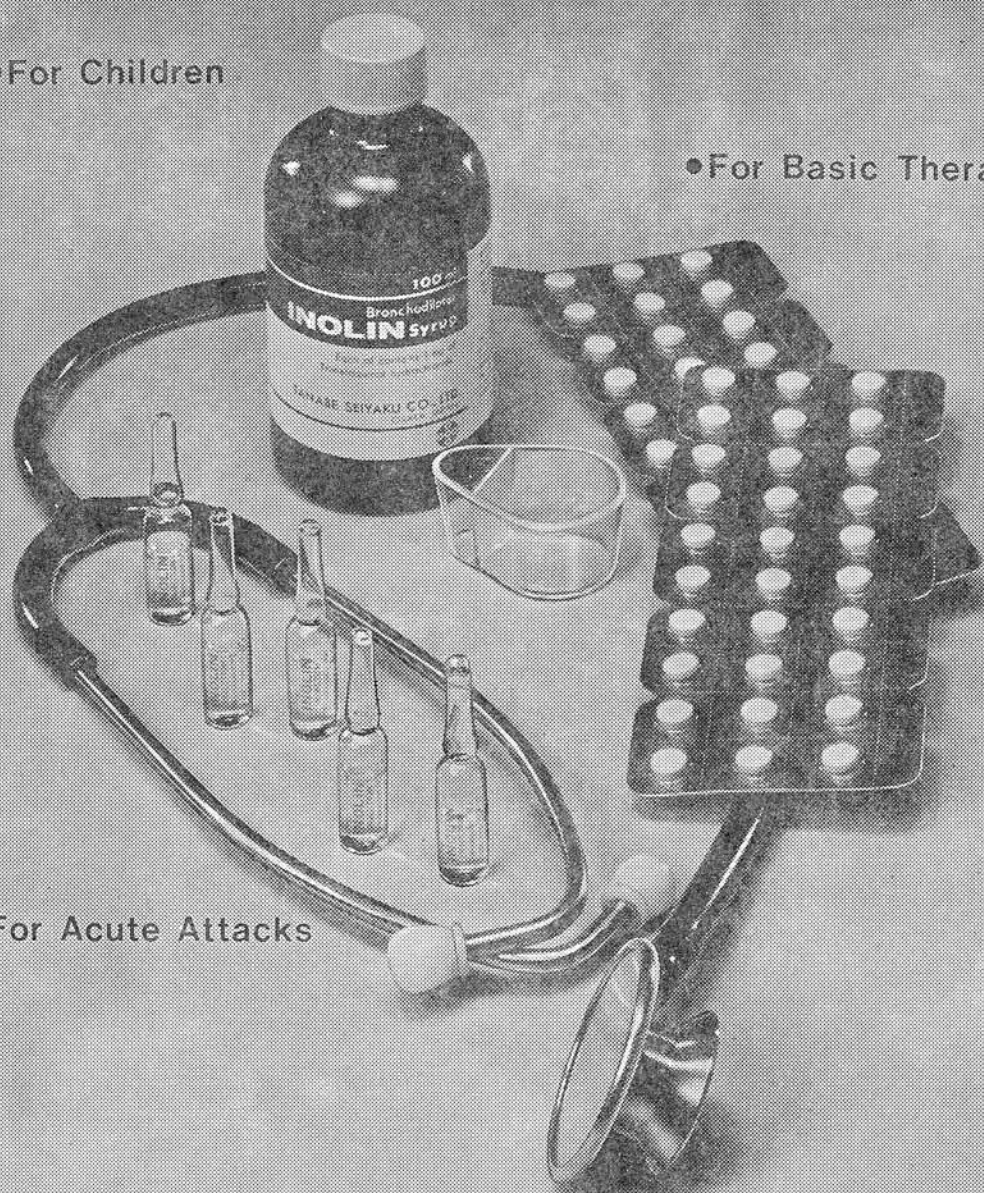
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A Journal of Medical Sciences of Japan and Asian Countries

Vol. 18, No. 9

September, 1975

CONTENTS

Present Condition of the Japan Medical Association

I. Outline of the Japan Medical Association (JMA)	7
II. Medical Education	13
1. Postgraduate Education	13
1) JMA Medical Lectures	13
2) JMA Special Medical Societies	14
3) TV Medical Study Course and Topics in Medicine	14
4) Short Wave (Medical) Broadcasting	15
5) JMA Film Library	15
2. Medical Prize and Medical Research Grant	15
3. The Japanese Association of Medical Sciences (JAMS)	16
III. Health Insurance System	18
1. Present Conditions and Problems of the Health Insurance System	18
2. Medical Service Fee	19
3. Criticism of the Current Health Insurance System	19
IV. National Medical Care Expenditure	24
1. National Medical Care Expenditure by Year	26
2. Ratio of National Medical Care Expenditure to Gross National Product	27
3. National Medical Care Expenditure by Payer	27
4. Ratio of Drug Costs in National Medical Care Expenditure	28
5. Transition of Vital Indexes	29
6. Structural Analysis of National Medical Care Expenditure —Comparison of Japan and the U.S.	30
V. Community Medicine	36
1. Outline of Hospital Organization	36
2. Hospitals Established by a Community Medical Association (CMA Hospitals)	39
3. Clinical Examination Centers Established by a Community Medical Association (CMA Centers)	42
4. Quality Control Survey	46

VI. Health Activities	50
1. Health Education	50
2. Local Community Health Council and Health Activities	50
1) Mother-and-Child Health Activities	54
2) Old People's Health Activities	55
3. School Health Activities	55
4. Industrial Health Activities	56
5. Family Planning	56
1) Population Problem	56
2) Actual Conditions of Family Planning	57
3) Birth Control Methods	58
 VII. Various Courses	 60
1. The Social Insurance Leaders' Course	60
2. The Industrial Medicine Course	60
3. The Course for Leaders on Family Planning and Eugenics and Maternal Protection Law	60
4. The School Health Course	61
 VIII. Public Information and Publication Activities	 62
1. The Journal of the Japan Medical Association	62
2. The JMA News	62
3. The Yearbook of National Medical Care	62
4. TV Program "The Health Promotion Age"	63
5. Other JMA Publications	64
1) Papers on Medical Ethics	64
2) Progress of Life Science	64
3) Adjustments of a Living Body	64
4) Japan Medical Terminology	64
5) Guide to Clinical Laboratory Examinations for Physicians	64
6) Status of Medical Research in Japan	64
7) For Your Health	65
8) Asian Medical Journal	65
9) The Japan Medical Association	65
10) Drug Information Cards	65
 IX. Workmen's Accident Compensation Insurance System	 66
1. Content of Workmen's Accident Compensation Insurance System	66
2. Present State of Workmen's Accident Compensation Insurance System	67
1) Coverage and Payments	67
2) Outline of Insurance Facilities	69
 X. Medical Care for Patients with Environmental Pollution- Related Disease	 71
1. Introduction	71
2. Environmental Pollution—Related Disease in Japan	71
3. Medical Care and Relief Measures of Patients with a Pollution—Related Disease	72
4. Comments	73

XI. Welfare Measures for Physicians	75
1. Pension System for Physicians	75
1) Establishment of a Pension System for Physicians	75
2) Outline of the Pension System	76
XII. The Physician's Liability in Japan: An outline and a basic principle of the legal dealing with disputes about medical accidents	81
1. Summary; Special about medical professional legal insurance	81
2. The Trend of the Legal Dealing with Disputes about Medical Accidents; Background of the Birth of the JMA's Medical Professional Liability Insurance	82
1) Trends in Case Law	82
2) Trends in Out-of-court Settlements, Especially Those by Medical Associations	83
3. Dispute Settlement with the JMA's Medical Professional Liability Insurance	84
4. Proposals to the World Medical Association	86
(Annex)	
The Japan Medical Association Guidebook Medical Professional Liability Insurance For JMA Members	87
XIII. Chinese Medicine in Japan	114
1. Abolition of System for Physicians of Chinese Medicine	114
2. Trend Towards Revival of Chinese Medicine	114
3. Modernization of Chinese Medicine	115
4. Research Institutes	115
5. What We Expect from Future Studies in Chinese Medicine	117
6. Periodicals on Chinese Medicine	118
7. Books on Chinese Medicine	118
XIV. Appendix	120
1. Medical Care and Related Statistics	120
2. Medical Schools	128
3. Medical and Related Institutes	133
4. Medical and Related Bodies	140

Abstracts of Scientific Session

on "Development and Allocation of Medical Care Resources"

1) Medical economic approach	
Dr. George Rösch	143
Dr. Joseph P. Newhouse	145
Dr. Barbara H. Kehrler	147
2) Medical approach	
Prof. Masakazu Kurata	150
Dr. John McCreary	152
3) Administrative approach	
Prof. Pacifico E. Marcos	158
Dr. William M. Wardell	162

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PRESENT CONDITIONS OF THE JAPAN MEDICAL ASSOCIATION

I. OUTLINE OF THE JAPAN MEDICAL ASSOCIATION (JMA)

The JMA is a professional organization that bears the greatest responsibility for the people's health and diseases. On the other hand, it also holds itself responsible, as a member of the World Medical Association, for the existence, health and diseases of the human being on a global scale.

Medical Education—The JMA is directing its greatest efforts to the undergraduate and postgraduate education of physicians. Also, the JMA president has been required by law to serve on the committee on the state examination for the licensing of medical practitioners. Other governmental committees or councils in which the JMA is represented by its officers are as follows:

Name	Competent Gov't Agency	JMA Officer	Status
Medical Ethics Council	Ministry of Health & Welfare	T. Takemi	JMA President
Council on Training of Physicians	"	T. Takemi	"
Medical Service Council	"	K. Matsukawa O. Hanawa	JMA representa- tive
"	"	K. Takashima S. Toyama T. Nakamura	Men of learning and experience
Central Social Insurance Medical Care Conference	"	M. Fujisawa T. Matsuura I. Narita M. Yamaguchi J. Kinoshita	Representatives for medical care personnel
Central Council on Massage, Acupuncture, Moxa-Cautery & Judo- Orthopedics	"	K. Matsukawa	Men of learning and experience
Committee on Examina- tion of Qualification for Necropsy	"	H. Kumagai	Physician

Tuberculosis Control Council	Ministry of Health & Welfare	M. Fujisawa	Men of learning and experience
Population Problem Council	//	T. Takemi	//
Central Council of Pharmacy	//	H. Kumagai	//
Central Eugenic Protection Committee	//	T. Toyama	//
Central Mental Hygiene Council	//	I. Motoyoshi	//
Nutrition Council	//	T. Takemi	//
Social Insurance Medical Fee Payment Fund	Social Insurance Medical Fee Payment Fund	(Trustee) N. Shimada O. Saito O. Hanawa (Auditor) M. Fujisawa	Representatives for medical care personnel
Medical Care Finance Conference	Medical Care Finance Corporation	O. Saito O. Hanawa	JMA representative
Japan School Safety Management Council	Ministry of Education	S. Shigeta	Men of learning and experience
International Cooperative Business Organization Management Council	International Cooperative Business Organization	H. Katsunuma	Men of learning and experience
Investigation Committee on Prevention of Infectious Diseases	Ministry of Health & Welfare	S. Shigeta	//
Vaccination Accidents Investigation Committee	//	S. Shigeta	JMA representative
Establishment Committee for Serum Bank	//	M. Fujisawa	//
Medical Care Personnel Council	//	T. Takemi	JMA president
Establishment Committee for Medical School (Medical Faculty)	Ministry of Education	H. Kumagai	Men of learning and experience
Conference on Measures for Specific Diseases	Ministry of Health & Welfare	K. Matsukawa	JMA representative
Expert Committee on Medical Terminology Code and Thesaurus	//	M. Fujisawa	Men of learning and experience ₂
Research Society on Blood Problems	//	T. Matsuura	//
Investigation Committee on Infectious Diseases Common to Man and Animals	//	S. Shigeta	JMA representative
Central Antipollution Measures Council	Environment Agency	O. Saito	//
Committee on Health Control Problems of Blood Donors	Japan Red Cross	T. Matsuura	JMA representative
Establishment Committee for Minamata Disease Treatment Research Center (provisional name)	Environment Agency	S. Yamagata	//

What part medical care should play in the people's life, especially when our standard of living is rising steadily as at present must be our greatest concern. In the past 20 years, the JMA has done much toward bringing the nation's medical care system to the level where it ought to be. During this time, the local medical associations, under the JMA leadership established their own hospitals and started community health investigation societies jointly with the local people and the autonomous governments concerned, thus extending the scope of their activities throughout the entire Japan. They are pushing vigorously with their respective plans for better community medical services.

As of April 1, 1975, the membership of the JMA was as follows:

Class A Member (Practicing and employed physicians, who have taken out the physician's indemnity insurance)	66,663
Class B Member (Employed physicians)	22,845
Class C Member (Unsalariated physicians)	2,205
Total	91,713

Joining the JMA is optional, not compulsory. And the fact that about 80% of all those eligible are members of the JMA testifies to the JMA's influence. By profession, the members include university professors, government officials, physicians employed in hospitals and private practitioners. The organization and character of the JMA follow:

Organization and Character of the JMA

Voluntary Affiliation Of the nation's total of 110,000 physicians, 91,713 are members of the JMA.

By profession:

Private practitioners

County, city and ward medical associations → Prefectural medical associations → Japan Medical Association

Physicians employed in hospitals

Government officials

Ministry of Health and Welfare Medical Association, prefectural government medical associations, etc.

Professors at medical colleges, etc.

University of Tokyo Medical Association, Keio University Medical Association, etc.

Scientific Branch

Japanese Association of Medical Sciences...66 academic societies

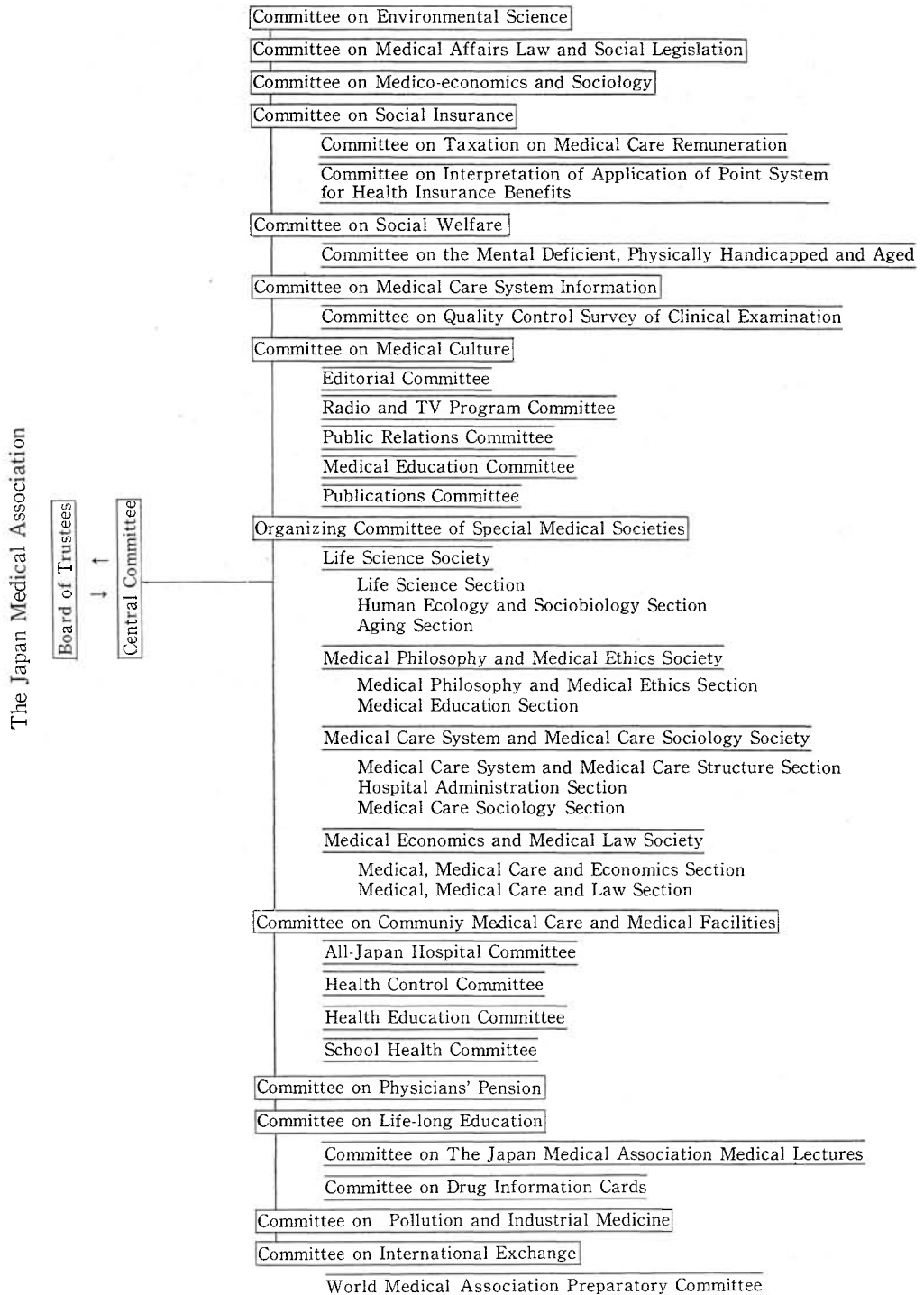
Special medical societies, largely in the domain of life science

As its scientific branch, the Japanese Association of Medical Sciences (JAMS) is amalgamated in the JMA and has a total of 66 academic societies under its control. The JAMS holds 6 symposium each year, and general assembly once every 4 years.

List of Member Academic Societies of the JAMS

1. Japanese Society of Medical History
 2. Japanese Association of Anatomists
 3. The Physiological Society of Japan
 4. The Japanese Biochemical Society
 5. The Japanese Pharmacological Society
 6. Japanese Pathological Society
 7. The Japanese Cancer Association
 8. Japan Haematological Society
 9. Japan Bacteriological Society
 10. Japanese Society of Parasitology
 11. Medico-Legal Society of Japan
 12. The Japanese Society for Hygiene
 13. Japanese Society of Race Hygiene
 14. Japanese Society of Food and Nutrition
 15. The Japanese Association of Physical Medicine, Balneology and Climatology
 16. Japan Endocrinological Society
 17. The Japanese Society of Internal Medicine
 18. Societas Paediatrica Japonica
 19. The Japanese Association for Infectious Diseases
 20. The Japanese Society for Tuberculosis
 21. Gastroenterological Society of Japan
 22. The Japanese Circulation Society
 23. The Japanese Society of Psychiatry and Neurology
 24. The Japanese Surgical Society
 25. Japanese Orthopaedic Association
 26. Japan Society of Obstetrics and Gynecology
 27. Japanese Ophthalmological Society
 28. Oto-Rhino-Laryngological Society of Japan
 29. The Japanese Dermatological Association
 30. Japanese Urological Association
 31. The Japanese Stomatological Society
 32. Japan Radiological Society
 33. The Association of Life Insurance Medicine of Japan
 34. The Medical Instrument Society of Japan
 35. Japanese Leprosy Association
 36. Japanese Society of Public Health
 37. The Japan Society of Sanitary Zoology
 38. The Medical Association of Transportation Hygiene and Casualties of Japan
 39. The Japanese Society of Physical Fitness and Sports Medicine
 40. Japanese Society of Industrial Medicine
 41. The Japan Broncho-Esophagological Society
 42. The Japanese Society of Allergology
 43. Japan Society of Chemotherapy
 44. The Society of Japanese Virologists
 45. Japan Society of Anesthesiology
 46. The Japanese Association for Thoracic Surgery
 47. The Japan Neurosurgical Society
 48. Japan Society of Blood Transfusion
 49. The Japanese Society for Medical Mycology
 50. The Japanese Association of Rural Medicine
 51. Japan Diabetic Society
 52. Japanese Association of Correctional Medicine
 53. Japanese Society of Neurology
 54. Japan Geriatrics Society
 55. The Japan Society of Human Genetics
 56. The Japanese Association of Rehabilitation Medicine
 57. Japan Society of Chest Diseases
 58. The Japanese Society of Nephrology
 59. The Japanese Rheumatism Association
 60. Japan Society of Medical Electronics and Biological Engineering
 61. The Congenital Anomalies Research Association of Japan
 62. Japan Society of Hepatology
 63. Japan Society of Plastic and Reconstructive Surgery
 64. Japan Society of Tropical Medicine
 65. The Japanese Society of Pediatric Surgeons
 66. Japanese College of Angiology
-

The JMA has the following committees:



Together, these committees cover all the fields of medical care, with their committees participated in also by many non-medical specialists. These committees are under the control of the Board of Trustees, which integrates the results of their efforts that constitute the JMA's activities. Under this setup, the JMA can study various problems in a broader perspective, that is, not only from the medical standpoint but also from the social and cultural viewpoints. Further, this enables the JMA to obtain realistic pictures of the existing comprehensive medical care system and community medical care systems.

As one of its businesses, the JMA has a special insurance to indemnify physicians for compensations for malpractice. And there is established for this system an appraisal organ by the highest medical and legal authorities.

As a program for postgraduate education, the Social Insurance Leaders Training Course is annually given by the JMA. The purpose of this course is to introduce the advances both in basic and clinical medicine to the social insurance services in this country. The program consists of a central meeting and the local meetings that move from county to county or from city to city for the convenience of those unable to attend the central meeting.

The JMA Medical Lectures are provided particularly for the benefit of practitioners, and all members of the local associations are obligated to be present at one of the lectures once every five years.

As for the welfare of physicians, the old age pension of the JMA provides for physicians retired from service, which has now grown into the largest system administered by any non-governmental body. There are also available to the JMA members the National Health Insurance of Physicians, the Credit Association of Physicians and the Finance Corporation.

Working under the organization and setup as outlined above, the JMA has come to be held in high esteem also for its social functions. In fact, the JMA is now playing a leading part in the matter of the health insurance system and social welfare in this country.

JMA periodicals are listed in section VIII-5.

II. MEDICAL EDUCATION

Medical education of the German type was introduced into Japan in the early part of the Meiji Era and was included in the university curriculum by the Ministry of Education. It continued up to the end of World War II.

After the war, however, the medical education of the German type has been replaced by that of the American type. However, the introduction of the intern system failed to produce the expected results due to the lack of preparations on the receiving side and had to be abolished. Instead, a new system was started under which medical students, upon graduation from school, are required to take the state examination for medical practice, to be followed by two years of internship at one of the hospitals designated by the government.

To promote this postgraduate education, the JMA makes its representations, whenever considered necessary, about its improvement, government subsidies to private medical schools, etc.

With regard to postgraduate education, the JMA is putting into practice the following programs.

1. Postgraduate Education

1) JMA Medical Lectures

It is often pointed out that the education of physicians is a life-long affair, which is true. In recognition of the urgent need in the postwar Japan for extensive postgraduate education for physicians to enable them to better meet the community medical care needs by keeping them up to date, with the ever advancing medical knowledge and technology as well as structural changes in disease, the JMA in 1962 instructed all the member prefectural medical associations to give the JMA Medical Lectures as follows:

1. One term will be for five years, and each member is expected to participate.
2. Accordingly, at least one-fifth of all the members will attend the first-year course.
3. Upon completion of the course, a certificate will be issued to each participant.
4. Practical training will also be provided at a designated hospital.

The result was that the physicians who attended the first-year course of 1st term (1962~1966) numbered 12,057 in the entire country, much in excess of the earlier expectation and achieving a most brilliant success for a program of this sort. For the second and later years, "JMA Medical Lec-

ture Series" in book form was published for the benefit of not only the participants but also those who were unable to attend in spite of their wishes because of the limit in the capacity of the lecture program. This series was distributed free of charge to all the Class A members up to 1974, and will be done so to both the Class A and Class B members from 1975 on.

While this year falls on the 4th year of the 3rd term (1972~1976), the attendances for the preceding two terms were:

1st term (1962~1966)	60,905 physicians (74.3%)
2nd " (1967~1971)	56,931 " (64.9%)

2) JMA Special Medical Societies

With the JMA is amalgamated the JAMS with a total of 66 academic societies. These societies are subdivided and specialized bodies working independently of each other. To guard against the shortcomings of excessive compartmentalization and to see things from a broader viewpoint, the special medical societies has been newly formed by the JMA.

Not only medical experts but specialists from all other related branches of science assemble in this meeting to integrate the fruits of work in many specialized fields of study so as to discover and point out new directions in medicine and medical care as they relate to life science.

The 1st meeting was held in Tokyo for 4 days from December 10, 1973. It was participated in by scholars and researchers on philosophy, psychology, economics, law, sociology, physics, chemistry, engineering and information technology, who considered various problems from the standpoint of life science. In early December of last year, the 2nd meeting took place also in Tokyo for 4 days, when lively discussions were held among scholars from various branches, centering on the main theme of "human survival order" and obtaining highly satisfactory results.

3) TV Medical Study Course and Topics in Medicine

Since April 1964, the JMA has been sponsoring a 30-minute program, "TV Medical Study Course," on Tokyo Channel 12 (8:30~9:00 a.m. every Saturday) as an advanced course for postgraduate education. This is a series of courses prepared by the JMA specifically for broadcasting, each course lasting for 3 to 6 months. These TV broadcasts have also been made available in 16 mm films, video tapes or 8 mm cassette tapes and are being widely used at supplementary training courses for local private practitioners. The subject of the course for the first half of this year (Jan.—June) was "Vital Adjustments," Series No. 39, and that for the latter half (July—Dec.) is "Receptors," Series No. 40.

"Topics in Medicine" is being broadcast on the same station from 8:15 a.m. for 15 minutes every Saturday, or immediately before the program just mentioned. This program was started in 1960, and is designed to introduce to physicians and researchers current topics of medicine and their bearings on clinical practice.

4) Short Wave (Medical) Broadcasting

Since 1954, the JMA has also been planning two radio programs, "the Medical Course" and "the Special Medical Course" by the Japan Short-wave Broadcasting Station to support and further promote the post-graduate education. Particularly the Special Medical Course is organized as a long-term program to cover systematically progress in both health administration and the basic and clinical medicine. On the other hand, the Medical Course is planned by the Radio and TV Program Committee of the JMA, and is on the air from Monday through Saturday every week, for 20 minutes from 10:00 p.m. The Special Medical Course is being broadcast on every Sunday, for 30 minutes from 10:00 p.m.

In commemoration of the 20th anniversary of the medical course on the Japan Short-wave Broadcasting network, a special program entitled "Progress of Japanese Medicine during the Past 20 Years" was planned by the JMA and broadcast over three months from October of last year (for one hour every Sunday morning).

5) JMA Film Library

The JMA Film Library was set up in 1964. Since then, the number of films collected continues to grow year after year as new films are received frequently, in addition to the video tapes of the TV Medical Study Course mentioned earlier. And the JMA is lending out these films free of charge on request, with the utilization rate rising steadily.

On the other hand, taking the opportunity of the opening at each prefectural association of a "health room" as a project to promote health education in the local community, the JMA has decided to make use of these films as audio-visual aids for the purpose. To facilitate this and other general uses, 16 mm films are being reprinted in 8 mm cartridge films. Also, the TV Medical Study Courses given during and after April 1973 have all been copied as films for use in the "Health Forum."* Thus the JMA Film library now represents one of the largest collections of medical films, consisting of altogether some 800 16 mm films, 8 mm cartridges and video tapes.

2. Medical Prize and Medical Research Grant

The "JMA Medical Research Encouragement Prize" was created in 1961 and was renamed simply as "JMA Medical Prize" in 1968, to encourage efforts to contribute to the progress of Japanese medicine. This prize is awarded to two persons each year for important achievements in the fields of basic medicine, clinical medicine or social medicine, each winner being granted ¥2 million.

* Under the guidance of the JMA, prefectural medical association hold "Health Forum" for the health of the community residents on the level of community medical associations.

In the following year, 1962, the "JMA Medical Research Grant" was founded. This grant is given on a total of 15 subjects of important researches each year in the fields of basic medicine, clinical medicine or social medicine. The amount of the grant is ¥1 million for each subject, and subjects yet to be taken up for research already under way are not considered.

The presidents of the academic societies of the JAMS, deans of the medical faculties of universities, presidents of medical colleges and heads of all other related institutes are requested to recommend one candidate each for the Medical Prize and three subjects for the Medical Research Grant. On the basis of their recommendations, the final selection of the winners of these two awards is made by the Medical Education Committee of the JMA. The winners are presented with their respective awards at the anniversary of the JMA, which is held on November 1 to commemorate its foundation.

3. The Japanese Association of Medical Sciences (JAMS)

JAMS is a branch of the JMA, and has under its control a total of 66 academic societies (also see the description under this heading). A general assembly used to be held every four years to coordinate the efforts of all these societies. With the rapid progress of specialization and compartmentalization of medical science of late, however, the increasingly urgent need for integrating their separate activities has been felt. As a step in this direction, the 1st JAMS symposium was held in Sapporo in 1965 on the main theme of the "Kidney and Electrolyte." Since then, four to five symposiums were held each year. For this year which falls on the 10th year since the 1st symposium, the 40th JAMS symposium was held in Keidanren Hall, Tokyo, on July 4 on the main theme of "Hormones and Receptors."

These symposiums are designed for participation mainly by young researchers, taking up most up-to-date topics. Lively discussions characteristic of these meetings are winning very favorable comments in many quarters, and they are attracting more and more participants.

In contrast, the JAMS general assembly, it must be admitted, has now grown perhaps a little too big in the course of time, with problems coming to the fore. To cope with the situation, a special committee has been formed to consider "How JAMS Should Be," while how to maintain necessary order in the medical circles and other related matters are often items for discussion at the Board of Directors meetings. Thus, the JAMS is making strenuous efforts, working closely with the JMA, toward the progress and development of Japanese medicine.

As one of its businesses, the JAMS has compiled the "Japan Medical Terminology." With the advance of medicine, medical terms used become

more and more numerous as well as complicated. If these terms are adopted and used in each field independently of other fields of medicine, confusions detrimental to the progress of medicine as a whole is likely. For this reason, the JAMS had long been advocating the standardization of medical terminology. At its general assembly for 1940, therefore, the Medical Terminology Committee was started.

After many twists and turns including the World War II as the greatest obstacle in the way, The Japan Medical Terminology was brought to completion and published in April this year. A fruit of 35 long years, this much-awaited dictionary is meeting with very favorable reception by all those interested. Thus, it is expected that this dictionary will prove highly useful not only in the standardization of medical terms in Japan but also in establishing internationally the Japanese equivalents to foreign medical terms.

III. HEALTH INSURANCE SYSTEM

It is said that Japan has a universal health insurance system. This means that everybody is required to be covered by one health insurance plan or another. The fact is, however, several plans are being operated financially independently of one another. A detailed account of the development of various health insurance plans in this country is given in JMA President Takemi's "The Japan Medical Association and the History of the Development of Socialized Medicine in Japan" (Asian Medical Journal, 18 (6): 415-427, 1975).

1. Present Conditions and Problems of the Health Insurance System

The universal health insurance system today is by no means a product of systematic and planned efforts but simply a growth from piece-meal developments. The origin dates back to some 50 years ago when a number of business enterprises created their health insurance plans exclusively for their own employees. Understandably, such plans were beneficent in character, a trait which has been carried into many of the health insurance plans of today. This historical background probably explains the lack of the sense of solidarity among the insured. The law itself is made on this basic premise, and the people as the insured have not yet been able to get rid of the sense of belonging to their respective enterprises.

Under these circumstances, the JMA advocated in 1968 a drastic reform to integrate all the existing health insurance plans into three, namely, community health insurance, industrial health insurance and old people's health insurance. Since then, the JMA has been making every effort toward its materialization, which is a most difficult task involving revision of the law. The two greatest obstacles in the way of this reform appear to be the bureaucracy that is loath to part with its control over the nation's health insurance system and the egoism on the part of the business enterprises and their employees' unions tending to think only of their own immediate interests.

The results are that there are at present more than 5,200 insurers in

National Health Insurance:

In Japan health insurance systems are roughly classified into two categories, one covers employees and the other covers general populations. The latter is called National Health Insurance and now covers approximately 44 million insured persons including householders and their dependants not covered under the health insurance system. The responsible bodies for administration are city, town or village, as well as the National Health Insurance Associations.

Japan or—"profusion of health insurance plans"—as the JMA puts it. Such insurers include the government, local autonomous bodies, various mutual aid associations and associations of large business enterprises.

2. Medical Service Fee

Medical services as provided under the health insurance system are paid for according to the numbers of points as fixed by the Minister of Health and Welfare. In other words, the insurers pay for the medical services by medical service fee point table. Since this table applies equally to the insurers in the black and to those in the red, however, the former amass surplus funds every year, while the latter are forced to accumulate deficits.

In the past, this point table used to be revised annually upon consultation with the Central Insurance Medical Council as required by law. An advisory organ to the Minister of Health and Welfare, the Council consists of 20 members. They are 8 members who represent the insurers and the insured of various insurance plans, 8 members representing physicians, dentists and pharmacists (including 5 physicians as recommended by the JMA president), and 4 members representing the public interest. The representatives of the insured are chosen by the employees unions of large enterprises. Thus, the majority of the members are laymen as far as medical care is concerned. Therefore, it is hardly possible to expect this Council to evaluate properly medical services as is clear from the Council's actual performance in the past. The JMA has been contending in this connection that evaluation of the medical services should be made upon consultation between the Minister and the JMA president, without referring the matter to the Central Insurance Medical Council. Accordingly, all the members on the Ministry's committees, representing the JMA, the Japan Dental Association and the Japan Pharmaceutical Association tendered their resignations. A step in the right direction was made last April, however, when it was agreed that, so far as the new types of medical services emerging from the ever advancing medical studies were concerned, the points acceptable to the JMA might be adopted by the Minister without reference to the Council.

3. Criticism of the Current Health Insurance System

As has been explained above, the Health Insurance Law itself is benevolent in spirit and tends to be used by business enterprises as a tool for labor administration. It is no at all suitable to the reality of today. For instance, the life expectancy of the people is increasing sharply, bringing about a marked change in the nation's age distribution. This rising pro-

portion of elderly people is in turn leading to a higher rate of health insurance beneficiaries on the one hand and more expensive medical benefits on the other. In fact, this is driving the national health insurance system to the verge of collapse. Also, the existence of a great many association-managed health insurance plans of business enterprises, large and small, is making income redistribution—the basis of social insurance—impossible. Thus, the current medical insurance setup is inadequate to cope with the rapid expansion of the Japanese economy and the resultant pernicious inflation. Also, it is proving inadequate in that it tends to prevent many recent advances in medicine from being put into practical application to the detriment of both the people's welfare and the progress of medical science. Bound by unnecessarily rigid statutory restrictions, we are being barred from introducing appropriate measures for old people and children. These obstacles obviously work against the interests of the nation and should, therefore, be removed as soon as possible.

Tab. III-1
Change in Number of Persons Covered by Health Insurance
(In thousand persons and in percentage)

	Popula- tion	Number of persons covered by medical care security					Persons not cover- ed by any form of insurance
		Employees' health insurance	National health insurance	Liveli- hood pro- tection	Others	Total	
1955	89,767	32,484	28,711	1,682	100	60,568	29,169
1958	92,496	38,160	37,239	1,489	150	75,195	17,301
1961	94,710	45,918	46,809	1,499	100	94,126	184
1964	97,690	52,654	43,605	1,661	100	97,970	0
1967	100,770	56,341	42,660	1,515	100	100,566	0
1970	103,327	59,814	42,120	1,515	100	103,504	0
1972	107,332	62,209	44,041	1,349	100	107,699	0
1955	100.00%	36.19%	31.98%	1.87%	0.17%	67.51%	32.49%
1958	100.00	41.26	40.30	1.65	0.16	81.30	18.79
1961	100.00	48.25	49.23	1.63	0.16	98.90	1.20
1964	100.00	53.90	44.69	1.75	0.10	100.00	—
1967	100.00	56.23	42.86	1.56	0.10	100.00	—
1970	100.00	57.89	40.76	1.47	0.10	100.00	—
1972	100.00	57.76	39.11	1.25	0.09	100.00	—

Source: Social Insurance Agency

Fig. III-1 Date of Establishment of Various Health Insurance Plans
(As of September 1974)

*Year when total health insurance coverage for the entire population was achieved

Insured person		1925	1935	1945	1955	1959*	1965	Insurance carrier	
Employees	Ordinary employees	Health insurance					Administered by government		Government 1
							Administered by associations		Associations 1,565
	Day laborers						Health insurance for day laborers	Government 1	
	Seamen						Seamen's insurance	Government 1	
	Government and other employees	National government employees					Mutual aid associations of national government employees	Associations 25	
		Public corporation officials and employees					Mutual aid associations of public corporation employees	Associations 3	
		Local government employees					Mutual aid associations of local government employees	Associations 90	
	Private school teachers and employees						Mutual aid association of private school employees	Association 1	
	Unemployed or self-employed						National health insurance	Cities 3,275 Associations 193	

1959

Tab. III-2 Change in National Medical Care Expenditure

Year	Medical care expenditure		Medical care expenditure per person (yen)	GNP (In 100 mil. yen)	Gross national income (In 100 mil. yen)	Percentage of medical care expenditure		Estimated drug cost (In 100 mil. yen)
	Total amount (In 100 mil. yen)	Ratio compared with preceding year				In GNP (%)	In gross national income (%)	
1959	3,625	1.12	3,899	136,089	110,233	2.66	3.29	678
1960	4,095	1.13	4,384	162,070	132,691	2.53	3.09	863
1961	5,130	1.25	5,441	198,528	157,551	2.58	3.26	1,286
1962	6,132	1.20	6,443	216,595	177,298	2.83	3.46	1,805
1963	7,541	1.23	7,843	255,921	206,271	2.95	3.66	2,587
1964	9,389	1.25	9,661	296,619	233,904	3.17	4.01	3,447
1965	11,224	1.20	11,421	328,125	261,059	3.42	4.30	4,478
1966	13,002	1.16	13,126	384,495	304,863	3.38	4.26	5,058
1967	15,116	1.16	15,080	453,221	363,120	3.34	4.16	6,379
1968	18,016	1.19	17,766	533,680	430,058	3.38	4.19	7,134
1969	20,780	1.15	20,244	629,972	499,763	3.30	4.16	8,706
1970	24,962	1.20	24,032	732,372	592,330	3.41	4.21	10,784
1971	27,250	1.09	25,949	814,464	656,424	3.35	4.15	11,908
1972	33,994	1.25	31,672	955,644	761,456	3.56	4.46	15,773

Fig. III-2
 Classification by Insurance Plan of Persons Covered by Health Insurance (%)
 (Fiscal 1972)

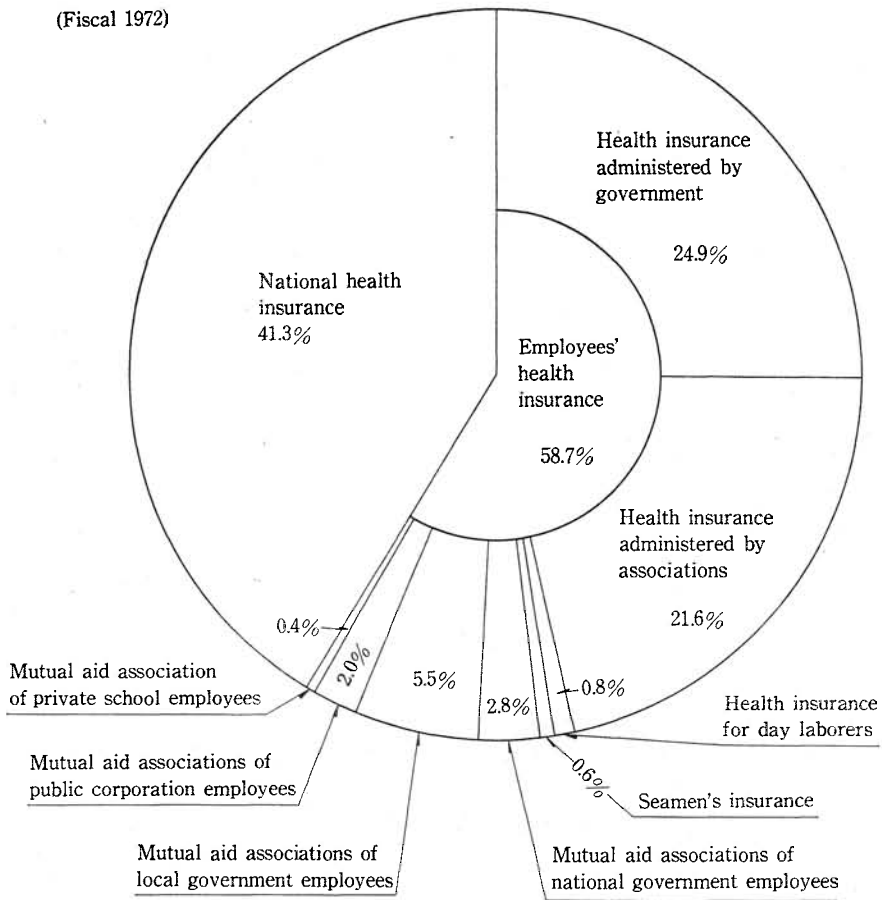


Fig. III-3 Percentage of Insured Persons by Age Group

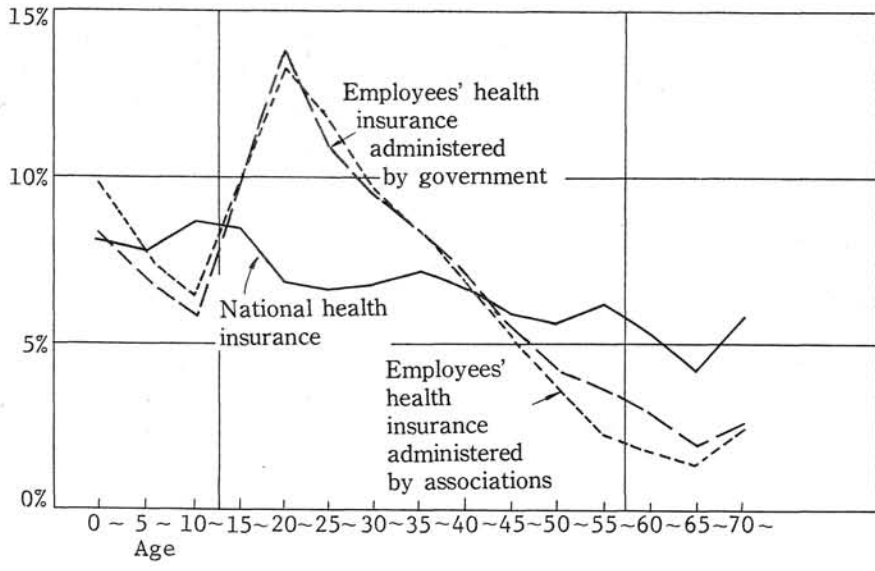
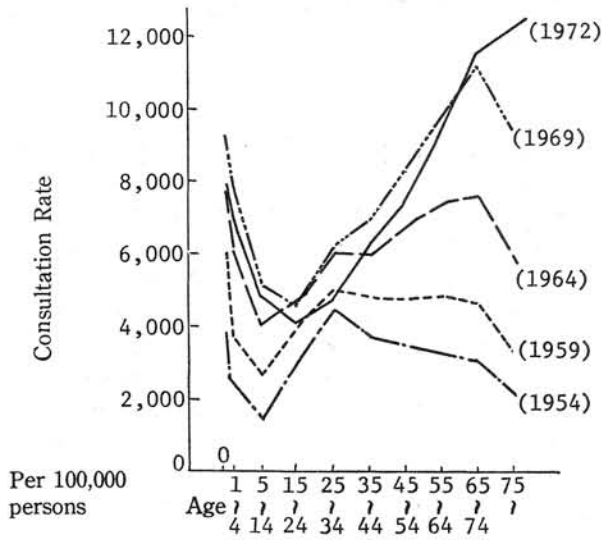
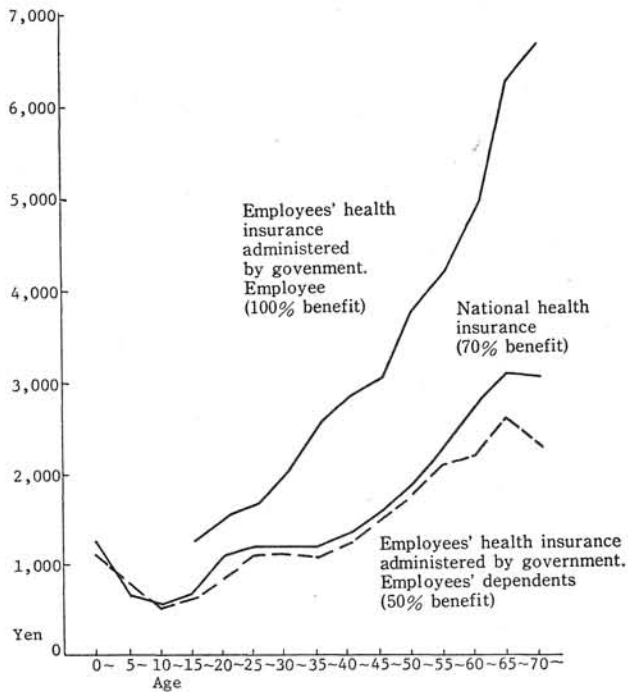


Fig. III-4 Consultation Rate (No. of patients visited hospitals and clinics per 100,000 population a day) by Age Group



Source: "Patient Survey" by the Statistics and Information Department, Ministry of Health and Welfare

Fig. III-5 Annual Medical Expenses per Person by Age (1970)

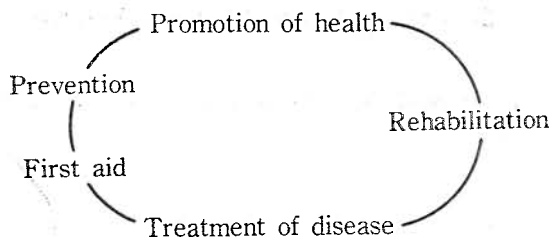


IV. NATIONAL MEDICAL CARE EXPENDITURE

Since 1954, the Ministry of Health and Welfare has published annually data on national medical care expenditure, the latest figures available being for fiscal 1973. (Please see Tab. IV-1 and Fig. IV-1)

By definition, national medical care expenditure is the sum total of the expenses spent on diseases and injuries during a year as classified by payer, namely, the Treasury (state), the insurer of various social insurances, the insured and their dependents, and the individuals who spend outside the insurance coverage. Expenses for normal pregnancies and deliveries are not included because they are not covered by social insurance, nor are those for vaccination, health examinations and screenings that are not treatment of diseases.

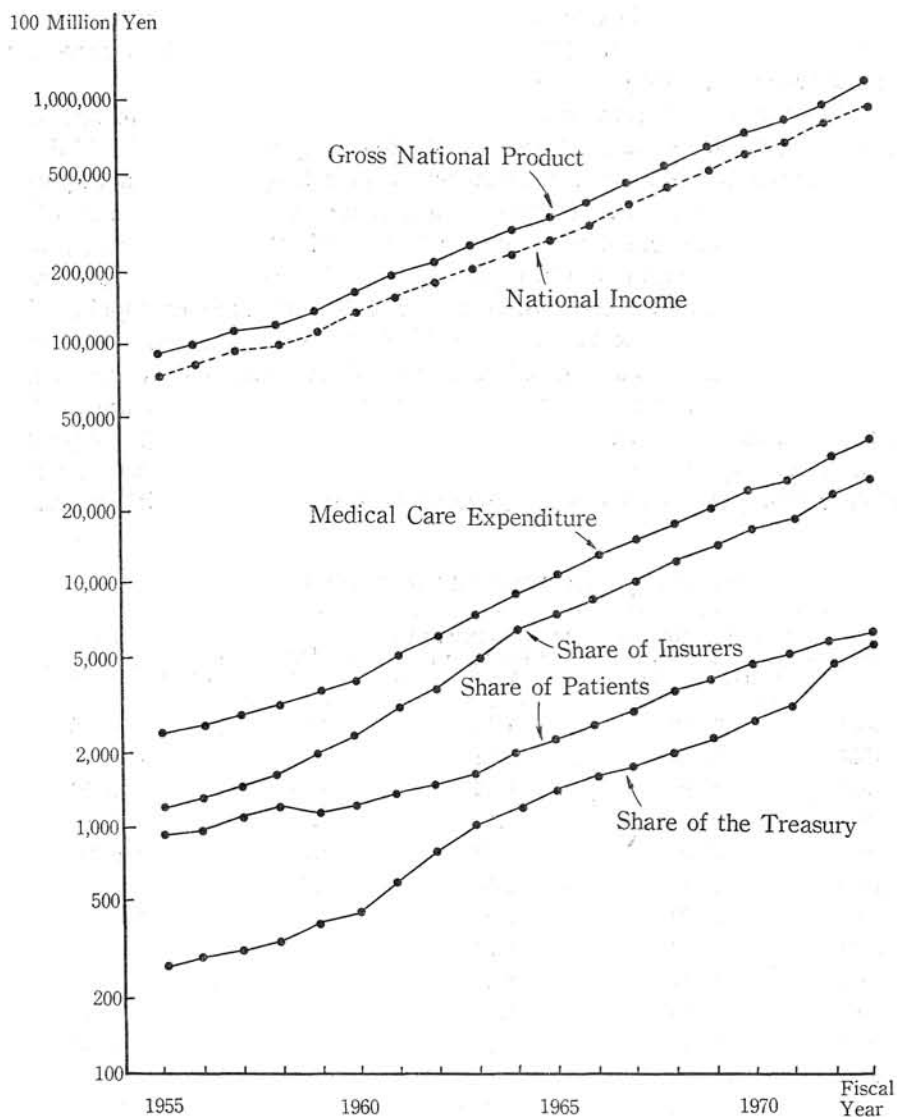
Medical expenses paid for the treatment of diseases or injuries have hitherto been regarded as consumption.



Tab. IV-1 National Medical Care Expenditure by Payer
(Fiscal Year of 1973)

	Estimated Amount (in 100 million yen)	Percentage (%)
Medical Expenditure	39,496	100.0
Share of the Treasury	5,488	13.9
Share of Insurers	27,767	70.3
Health Insurance	23,926	68.2
Employess Health Insurance	17,593	44.5
The Insured	11,464	29.0
Dependents	6,130	15.5
National Health Insurance	9,332	23.6
Others	842	2.1
Share of Patients	6,241	15.8

Fig. IV-1 National Medical Care Expenditure, Gross National Product and National Income by Year



However, when we think of the physicians with his training in medicine, contributing to the good of society as a whole, medical expenses may well be considered an investment for the acquisition of better health, not consumption.

Indeed, this is the viewpoint of the JMA which aims to realize a welfare state. Seen from this standpoint, the annual national medical care expenditure is nothing but the people's annual investment in health.

1. National Medical Care Expenditure by Year

The national medical care expenditure showed a 16.5-fold increase from ¥238,800 million in 1955 to ¥3,949,600 million in 1973 (please see the attached Tab. IV-2).

The period from 1955 to 1960 saw a steady growth from ¥200,000 million to ¥400,000 million. With the complete implementation in 1961 of the universal insurance system under which everybody was covered by one insurance scheme or another, the amount began to increase more rapidly. And this sharp rise was further accelerated in and after 1963, when various restrictions on medical services provided by the medical care insurance system were lifted by the efforts of the JMA, the amount topping the ¥1,000,000 million mark by 1965. In 1973, it came to nearly ¥4,000,000 million. Generally speaking, national medical care expenditure continued to increase exponentially. To be more concrete, the average annual increase rate for the 5 years from 1961 came to a little over 20%, compared with about 10% for the immediately preceding years. And the rate for 1966 to 1973 averaged 15 to 20% except 1971 (when the physicians under

Tab. IV-2 National Medical Care Expenditure by Year

Year	National Medical Care Expenditure (In 100 million yen)	Ratio Compared to Preceding Year	Versus GNP (%)	GNP (In 100 million yen)
1955	2,388	1.11	2.69	88,646
1956	2,583	1.08	2.60	99,509
1957	2,897	1.12	2.58	112,489
1958	3,230	1.12	2.74	117,850
1959	3,625	1.12	2.66	136,089
1960	4,095	1.13	2.53	162,070
1961	5,130	1.25	2.58	198,528
1962	6,132	1.20	2.83	216,595
1963	7,541	1.23	2.95	255,921
1964	9,389	1.25	3.17	296,619
1965	11,224	1.20	3.42	328,137
1966	13,002	1.16	3.38	384,186
1967	15,116	1.16	3.34	452,967
1968	18,016	1.19	3.38	532,882
1969	20,780	1.15	3.34	622,599
1970	24,962	1.20	3.42	730,461
1971	27,250	1.09	3.34	815,770
1972	33,994	1.25	3.59	947,265
1973	39,496	1.16	3.43	1,152,631

Source: "National Medical Care Expenditure", Health and Welfare Statistics Department, Minister's Secretariat, Ministry of Health and Welfare.

the directive by the JMA declined en bloc to provide insurance medical services in protest against the breach of promise on the part of the government).

2. Ratio of National Medical Care Expenditure to Gross National Product

The ratio of the national medical care expenditure to the gross national product (GNP) may well be looked upon as an index of the state's intention toward health investment.

The GNP of Japan which stood at ¥8,864,600 million in 1955 rose to ¥115,263,100 million by 1973. Now, how much was health investment during this period (please see Tab. IV-2).

For years 1955 to 1963, the ratio of the national medical care expenditure was running at 2 to 2.5%. Thanks to the above-mentioned lifting of various restrictions on social insurance medical services, however, this ratio rose to more than 3% in 1964, which continued to grow further, though gradually, to register a record high of 3.59 in 1972 and to level off to 3.43% in 1973. When compared with the figures of the advanced Western countries that are 7 to 10% however, our ratio, it must be admitted, is still extremely low.

In this connection, the JMA has been insisting that the government should take positive steps to elevate this ratio of health investment up to that of the advanced countries now that the government has decided to switch the GNP-oriented policy to a welfare state-oriented policy. In response to the JMA's strong representations, the medical fees have been altered to be revised twice annually since 1974, no doubt pushing up this ratio appreciably, though detailed figures are yet to be announced.

With a slowing down of the growth rate of the GNP and with a steady upward trend of the national health investment due to the increasing application of the results of the progress of medicine in years to come, this ratio is expected to shift gradually to the Western countries' standards.

3. National Medical Care Expenditure by Payer

The share of the national medical care expenditure as borne by the state Treasury rose from 11.7% in 1955 to 13.9% in 1973 (please see Tab. IV-3 Annual National Medical Care Expenditure by Payer). During the same period, the share of the insurers, etc. recorded a marked rise from 49.6% to 70.3%.

On the contrary, the share of individuals dwindled from 38.7% to 15.8% due to the expanding coverage by the social insurances and the increasing publicly financed medical services in recent years for the aged and others.

Tab. IV-3 Changes in National Care Expenditure by Payer

Fiscal Year	1955	1960	1965	1970	1971	1972	1973
Medical Expenditure	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Share of the Treasury	11.7	11.0	13.1	11.3	11.8	13.6	13.9
Share of Insurers	49.6	59.0	66.3	69.4	69.3	63.8	70.3
Share of Patients	38.7	30.0	20.6	19.3	19.0	17.6	15.8

Source: "National Medical Care Expenditure", Health and Welfare Statistics Department, Minister's Secretariat, Ministry of Health and Welfare.

4. Ratio of Drug Costs in National Medical Care Expenditure

The level of the technical fees in the medical care expenses under the social insurance system in Japan is deplorably low, though they are improving gradually. And this is making the share of drug costs relatively high.

In 1955 drug costs accounted for only a little more than 15%, which increased to over 20% by 1960, and has risen to above 40% since 1967.

A sharp increase in drug costs is a tendency common to all advanced countries. And this is also the case with Japan. Whereas the physician's technical fees are, as it has been pointed out, rising but slowly, newly-developed drugs resulting from ever advancing medicine are being applied actively to practical use by physicians. Please see Tab. IV-4 Output of Drugs by Year.

Tab. IV-4 Output of Drugs by Year

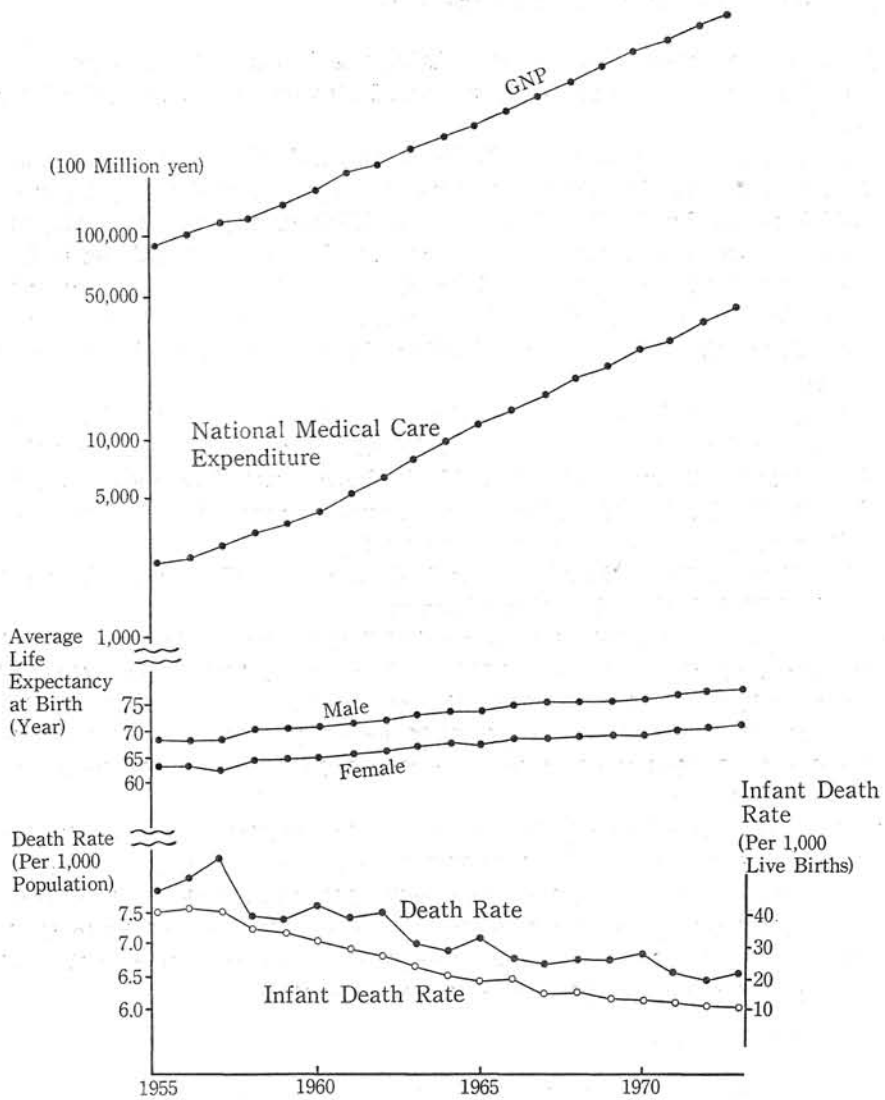
Year	Output	Index
1961	218,075	100.0
1962	265,596	121.8
1963	341,141	156.4
1964	423,225	194.1
1965	457,639	209.9
1966	507,108	232.5
1967	563,257	258.3
1968	688,953	315.9
1969	842,514	386.3
1970	1,025,319	470.2
1971	1,060,424	486.3
1972	1,091,791	500.6

5. Transition of Vital Indexes

Whereas national medical care expenditure is regarded as our investment in health, vital indexes may be taken as the result of such investment.

Fig. IV-2 shows the trends of the nation's death rate, infant death rate and average life expectancy at birth as set against the changing national

Fig. IV-2 Transition of Vital Indexes as Set Against the Changing National Medical Care Expenditure



medical care expenditure. As the table shows, the death rate fell from 7.8% in 1955 to 6.6% in 1973, and the infant death rate per 1,000 live births improved from 39.8% to 11.3% during the same period. The average at birth in 1955 was 63.60 years for males and 67.75 years for females, to be improved by 1974 to 71.16 years and 76.31 years, respectively. Now, Japan can stand comparison in this respect with the top-ranking countries of the world such as the Netherlands and Sweden.

6. Structural Analysis of National Medical Care Expenditure— Comparison of Japan and the U.S.

- 1) Japan has been endeavoring to bring the levels of its economic and social structures to those of the advanced Western countries, particularly the U.S.

In recent years the welfare state has been much discussed in this country, and in assessing the nation's welfare expenditure-bearing capacity, which should be the key factor for establishing any welfare state, we can compare as a useful approach the capacity of Japan and the U.S. The term "welfare expenditure-bearing capacity" as used here does not refer to the capacity of individual patients to pay, but it means the capacity of the entire state to distribute its resources for this particular purpose.

In Japan, the risks have been well spread under the universal insurance system and, moreover, old age and infant insurance systems are being introduced. Consequently, individuals have much less awareness of bearing the burden of medical care expenses compared with Americans with their incomplete social insurance setup.

Nevertheless, the ratio of the medical care expenditures to the GNP in the U.S. is higher than that of Japan.

- 2) In the U.S., if we take the year 1934/35 as representative of a normal prewar year, the ratio was 4.1%, a figure even higher than that of Japan today. By 1964/65, this ratio rose to 5.9% and continued to rise consistently thereafter to reach 7.7% as of 1972/73. Thus, Japan is lagging far behind the U.S. in the ratio of the resources distributed to the medical care.
- 3) This macroscopic analysis serves to bring to light the quantitative difference between Japan and the U.S. in respect of the resource distributive pattern. And assuming Japan will shift toward the U.S. pattern, we can estimate our national medical care expenditures for 1972 to 1974. The relationship between national medical care expenditure (M) and GNP may be expressed by the following equation:

$$M = f(\text{GNP}) \dots\dots\dots (1)$$

Here "f" denotes the distributive pattern of medical resources in Japan

or the U.S. To specify this distribution function, we can have the following equation from Tab. IV-5, 6 and 7

$$M = A (\text{GNP})^b \cdot u \quad (2)$$

Here "u" denotes a random variable. Then it is possible to formulate

Tab. IV-5
Comparison of National Medical Care
Expenditure-GNP Ratios of Japan
and the U.S.

	the U.S.	Japan
1928—1929	3.6	
1934—1935	4.1	
1964—1965	5.9	3.3%
1965—1966	5.9	3.6
1966—1967	6.2	3.5
1967—1968	6.5	3.5
1968—1969	6.7	3.5
1969—1970	7.1	3.4
1970—1971	7.5	3.5
1971—1972	7.7	3.4
1972—1973	7.7	

Source: Statistical Yearbook, U.N.

Source: "National Health Expenditures, 1929-73"
Social Security Bulletin, March 1974
"National Medical Care Expenditure"
Ministry of Health and Welfare in Japan

Tab. IV-6 Comparison of the GNPs of Japan and the U.S.

	the U.S. (100 Million \$)	the U.S. (100 Million Yen)	Japan (100 Million Yen)	GNP of Japan GNP of the U.S.
1960	5,037	1,511,100	154,992	10.3
1961	5,201	1,560,300	191,255	12.3
1962	5,603	1,680,900	211,992	12.6
1963	5,905	1,771,500	244,640	13.8
1964	6,324	1,897,200	289,317	15.2
1965	6,849	2,054,700	319,555	15.6
1966	7,499	2,249,700	368,294	16.4
1967	7,939	2,381,700	435,845	18.3
1968	8,642	2,592,600	516,772	19.9
1969	9,303	2,790,900	603,038	21.6
1970	9,771	2,931,300	710,078	24.2
1971	10,555	3,166,500	793,068	25.0
1972	11,552	3,465,600	906,939	26.2

Tab. IV-7
Comparison of National Medical Care Expenditure (NMCE) of Japan and the U.S.

	the U.S. (100 Mil. \$)	the U.S. (100 Mil. Yen)	Japan (100 Mil. Yen)	NMCE of Japan NMCE of the U.S.
1959—1960	258.56	77,568	3,625	4.7
1964—1965	388.92	116,676	9,389	8.0
1965—1966	421.09	126,327	11,224	8.9
1966—1967	478.60	143,580	13,002	9.1
1967—1968	535.63	160,689	15,116	9.4
1968—1969	599.77	179,931	18,016	10.0
1969—1970	680.83	204,249	20,780	10.2
1970—1971	756.29	226,887	24,962	11.0
1971—1972	847.10	254,130	27,250	10.7
1972—1973	940.70	282,210	33,994	12.0

the following econometric model of a single equation as a log-linear of Equation (2):

$$\log_e M = \log_e A + \beta \log_e \text{GNP} + \log_e u \quad (3)$$

It is assumed that "u" is log normal. Generally, the distribution function of the random variable u that is log normally distributed with parameters σ , σ^2 is

$$\phi(u; \sigma, \sigma^2)$$

and this is defined by

$$N(\log u; \sigma, \sigma^2) = N\left(\frac{\log u}{\sigma}; \sigma, 1\right)$$

Furthermore, we assume that log GNP and log u are statistically independent, although this assumption may not be attained. What is important here is the coefficient " β ", which is elasticity itself. By estimating numerical values for this equation, it would be possible to grasp quantitatively this elasticity and then to compare differences between Japan and the U.S., thereby acquiring a guideline for our national medical care expenditure.

The U.S.: Estimation period 1964/65 to 1972/73

$$\log_e M = 0.70274 + 1.51693 \cdot \log_e \text{GNP} \quad R = 0.9965$$

Japan: Estimation period FY 1956 to FY 1970

$$\log_e M = -1.83670 + 1.12532 \cdot \log_e \text{GNP} \quad R = 0.9948$$

Notes 1) Elasticity ϵ is defined as $\epsilon = \frac{\frac{dy}{y}}{\frac{dx}{x}}$,

growth rate of y: $\frac{dy}{y}$, growth rate of x: $\frac{dx}{x}$

This means that 1% change in x is accompanied by an $\epsilon\%$ change in y. From this, we can have

Growth rate of national medical care expenditure = Elasticity \times Growth rate of GNP

2) From the equation $\log_e y = \alpha + \beta \cdot \log_e x$, we can have the elasticity by differentiating $\log y$ by $\log x$

$$\epsilon = \frac{d(\log_e y)}{d(\log_e x)} = \frac{\frac{dy}{y}}{\frac{dx}{x}} = \beta$$

4) On the basis of the above estimates, we can forecast our national medical care expenditure of both i) the same pattern as before and ii) the U.S. pattern.

The estimated elasticity of the national medical care expenditure to the GNP is 1.5 for the U.S. and 1.1 for Japan. It must be pointed out that this difference of 0.4 in elasticity between Japan and the U.S. produces a great gap in the course of time as illustrated in Fig. IV-3. Although Japan is fast catching up with the U.S. in GNP, its growth in national medical care expenditure is comparatively slow.

Using the estimated elasticity and GNP growth, we can estimate our national medical care expenditure for 1973 and 1974 with the following formula

Growth of national medical care expenditure = Elasticity \times Growth of GNP

$$\frac{dy}{y} = \epsilon \times \frac{dx}{x}$$

i) In the case of the same pattern as before (elasticity 1.13)

Growth of GNP for 1972/73 was 21.9%

so the growth of the national medical care expenditure could be calculated as follows,

$$21.9 \text{ (GNP growth)} \times 1.13 \text{ (elasticity)} = 24.747\%$$

Then, the increment of the national medical care expenditure of 1973 over the previous year would be

$$¥3,399,400 \text{ million} \times 0.24747 = ¥841,250 \text{ million}$$

Therefore, the estimated national medical care expenditure for 1973

$$¥3,399,400 \text{ million} + ¥841,250 \text{ million} = ¥4,240,650 \text{ million}$$

Next, growth of GNP for 1973/74 12.0%

Then, the growth of the national medical expenditure

$$12.9 \text{ (GNP growth)} \times 1.13 \text{ (elasticity)} = 14.577\%$$

Then, the 1974 increment of the national medical care expenditures over the previous year

$$¥4,240,650 \text{ million} \times 0.14577 = ¥618,160 \text{ million}$$

Therefore, the estimated national medical care expenditure for 1974

$$¥4,240,650 \text{ million} + ¥618,160 \text{ million} = ¥4,858,810 \text{ million}$$

ii) In the case of the U.S. pattern (elasticity 1.5)

By the same calculation method as in i)

The 1973 increment of the national medical care expenditure

over the previous year ¥1,116,700 million

The estimated national medical care expenditure for 1973

$$¥4,516,100 \text{ million}$$

The 1974 increment of the national medical care expenditure

over the previous year ¥873,870 million

The estimated national medical care expenditure for 1974

$$¥5,389,970 \text{ million}$$

This amount comes to 1.586 times the amount for 1972, namely,

¥3,399,400 million, representing an increase of 58.6%

Fig. IV-3 Comparison of Ratio of National Medical Care Expenditure to GNP of Japan and the U.S.

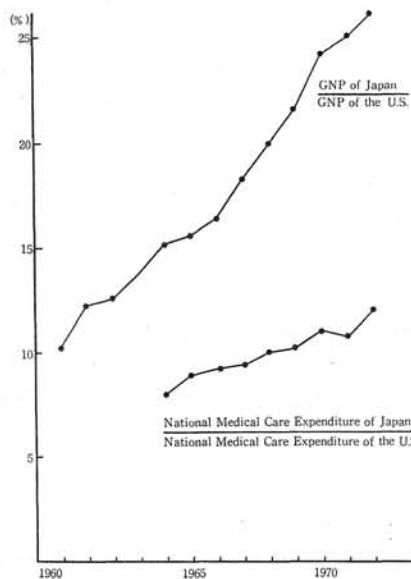


Fig. IV-4 National Medical Care Expenditure and GNP of the U.S.

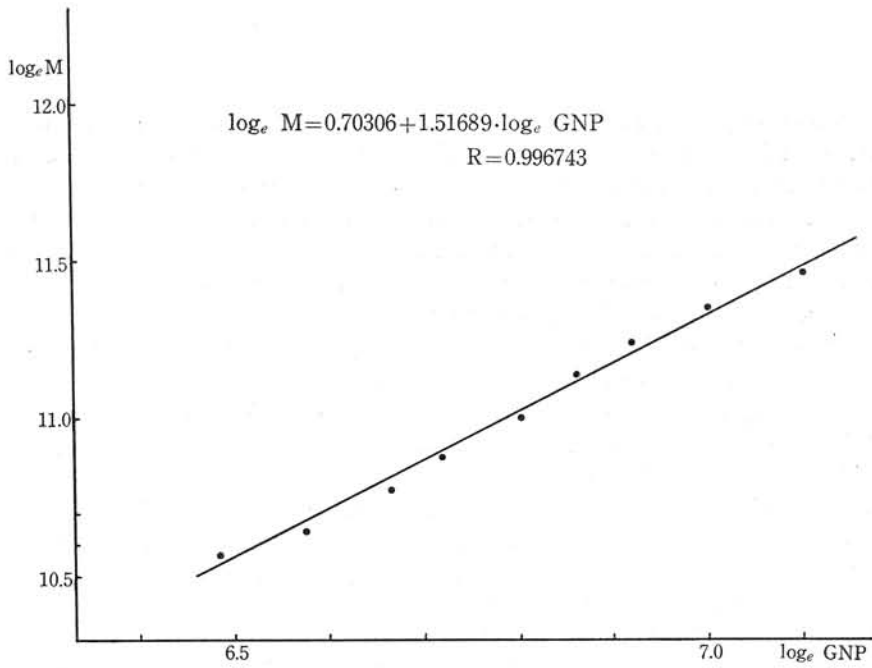
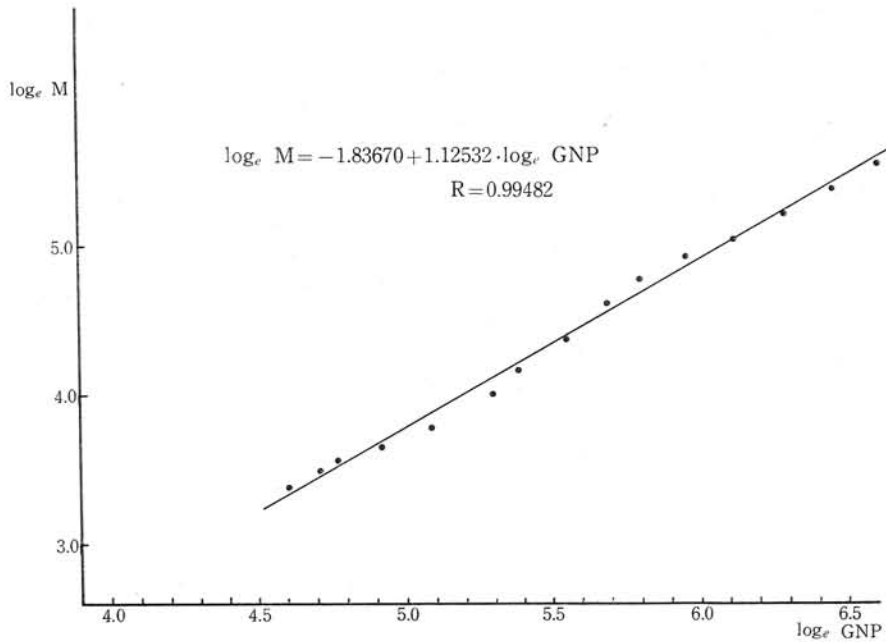


Fig. IV-5 National Medical Care Expenditure and GNP of Japan



V. COMMUNITY MEDICINE

To deploy medical resources properly for a comprehensive medical care in each community, with the establishment of the supreme position of physicians as the primary prerequisite as advocated by the JMA, and to bring all health measures in this country into an integrated whole, the JMA has been exerting its best efforts, through the activities of its various councils and committees, while consolidating its academic foundation. In response, the prefectural and other medical associations under its control are pushing ahead vigorously with plans to provide medical services that meet the particular needs of their respective communities.

The organization and very successful development of the hospitals established by community medical associations (hereinafter referred to as *CMA Hospitals*) and Clinical Examination Center established by community medical associations (hereinafter referred to as *CMA Centers*) to be described below were not aided by the Medical Service Law or other laws, but they were born solely out of many years' pains-taking endeavors of each medical association under the guidance of the JMA. As centers of medical care in each community, nurtured by and deeply rooted in its soil, they are today playing a pivotal role and are destined to render still greater services in the future.

I. Outline of Hospital Organization

The Medical Service Law of 1948 defines the hospital as a medical care facility having more than 20 beds.

As of the end of 1973, there were altogether 8,188 hospitals in this country. As is often the case with laws, however, the above definition tells little about the essential characters and functions of the hospital.

Hospitals are most advanced social facilities, which develop under the strong influence of the traditions of the regional communities in which they are located. To understand the characteristic features of the hospitals in Japan, therefore, we must look back into their historical background.

1) Historical Review of Hospitals

The first hospital in Japan, it is said, was one established at Shitenno by Prince Shotoku (574-622) who succeeded in bringing the country under the control of a central authority.

Since then, medical services used to be patronized by the imperial household as a concrete expression of its benevolence, with the teachings of Buddhism at its root.

A well-known example is Empress Komyo (701-760) who herself took care of lepers.

A new era of the Japanese medicine dawned and began to develop with the introduction of Western medicine by the Meiji Government.

The Government expected of the hospitals, before everything else, to play the part of the disseminator of the new and scientific western medicine.

In the early years of the Meiji Era (1868-1911), the directors of national and public hospitals were appointed from among the graduates of the Tokyo Imperial University or of other government universities, and this became a fixed pattern.

In those hospitals, physicians were employed for full time service, but at the same time their connections with their respective alma maters were highly valued.

Then, the central and prefectural governments came to have their hospitals, which have developed into public hospitals of today.

In the course of time, hospitals managed by the Japan Red Cross, Saiseikai, etc. came into existence particularly for public welfare while, on the other hand, private hospitals were established by university professors to provide places for their side work. Indeed, such was the beginning of private hospitals.

In local areas, hospitals were set up deeply implanted in each community. Unlike public ones, these hospitals were characterized by close human relations between physicians and their patients.

More recently, specialized hospitals are coming into being with a single department, for instance, for the treatment of thyroid or cerebrovascular lesions, capable of giving medical services of a degree higher than those provided at university hospitals. These are privately owned and operated, but specialization is also being pushed forward by the national and public hospitals as illustrated by the establishment of the National Cancer Center, Adult Disease Centers, etc.

The above are the processes of spontaneous development of hospitals in Japan with the then prevailing social movements as the background.

Every hospital accepts both in-patients and out-patients independently of the other hospitals in the same area. Moreover, the growth of the industrial capitalism encouraged business enterprises to own their hospitals. And this idea also led to the establishment of health insurance societies and to the tendency to give only the type of medical care they wished to give.

It was generally thought that a hospital was a place where physicians upon graduation from a university put into practice what they had learned at university, and they were as a rule on a full-time employment basis.

Nurses used to be trained at the Japan Red Cross, with the main emphasis on the training to meet wartime requirements.

What wielded by far the greatest influence on the development of

Japanese hospitals was the directives by the Allied Occupation Forces after the end of the War.

The Allied Occupation Forces ordered a number of hospital reforms without due regard for the particular climatic conditions in Japan. The results were that some of them have never taken root in Japanese soil—notably, the intern and nurse training systems.

2) Characteristic Features of Hospitals

The characteristic features of hospitals in Japan which developed traditionally under the historical circumstances as mentioned above may be summarized as follows:

- (1) Directors of hospitals must be physicians themselves.
- (2) People, both out-patients and in-patients, have the freedom to choose any hospital or clinic .
- (3) There also exist in each community clinics with beds (not more than 19, the number of such clinics coming to 40,702 all over Japan) and clinics without beds (the number coming to 30,032 all over Japan) which have little functional relationship with any hospital.
- (4) The average period hospitalization for general beds is comparatively long—33 days—due to the fact that hospitals usually accept patients with acute diseases as well as those with chronic diseases.
- (5) The number of hospital personnel per 100 beds is relatively small (70 per 100 beds in the general hospitals) due to the payments system under the health insurance plan.
- (6) Many of the hospitals are in operation on a self-supporting basis, and are suffering from financial difficulties.
- (7) Each hospital must employ at least one pharmacist, and any hospital with more than 100 beds must further employ at least one nutritionist.

3) Future Tasks

Despite these peculiarities, patients in hospital seem to be fairly satisfied thanks to the efforts of the hospital personnel. With regard to the hospital's relations with the outside world, however, there remain many problems yet to be solved.

In a word, the hospitals have so far failed to give sufficient thought to how they should be in this high—welfare, technological and information society of today. Instead, they have been seeking to solve various problems within themselves. It must also be pointed out that there was something inherent in the system that encouraged such a tendency.

To cope with the situation, the JMA established in 1960 the Department of Hospital Administration, which has since been making investigations by specialists into hospital problems.

Of many demands to be made on our hospitals, we regard the following as particularly important.

- (1) Establishment of Hospital Ethics

To establish the concept that the hospital is a sacred place founded on the spirit of the reverence of life.

- (2) To establish a firm hospital organization as backed up by the sense of social solidarity.
- (3) To establish a hospital image in conformity with the theory of location on welfare for a community.
- (4) To establish the hospital as an integrated medical technology unit.
- (5) To establish the internal order of hospitals in a community.

Hospitals are destined to play an increasingly greater role in the field of medical care, but they shall never be able to fully serve the people's welfare until and unless they become an integral part of the community. And to attain this end, the hospital must become a center for the development of learning and technologies as well as place with great potential growth in store.

2. Hospitals established by a Community Medical Association (CMA Hospital)

Since around 1973, the JMA has been stressing to the community medical associations the necessity of setting up hospitals by and for themselves. In other words, the CMA Hospital is a hospital that is established by a joint investment of all the members of a medical association and that is operated by them as the key personnel.

Fig. V-1 Change in Number of CMA Hospitals by Years

(Oblique lines indicate new hospitals established during the year)

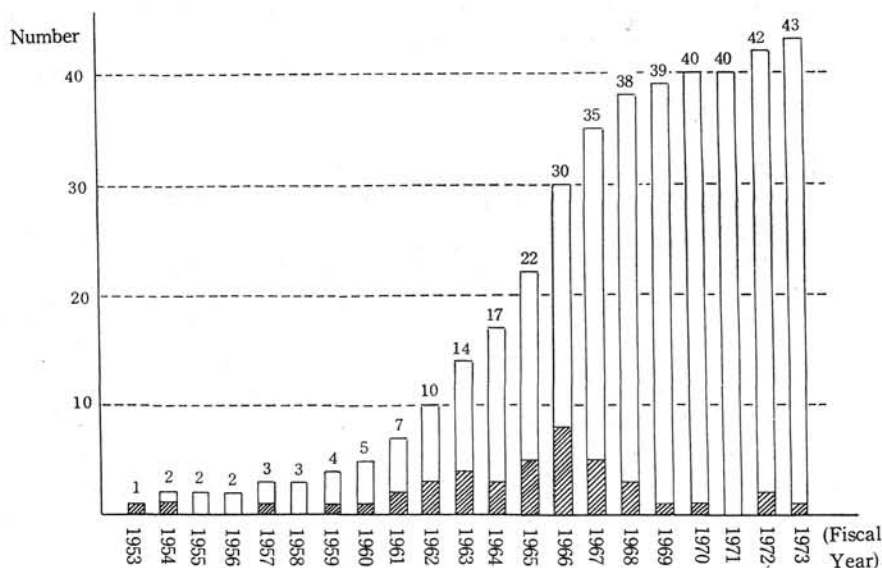
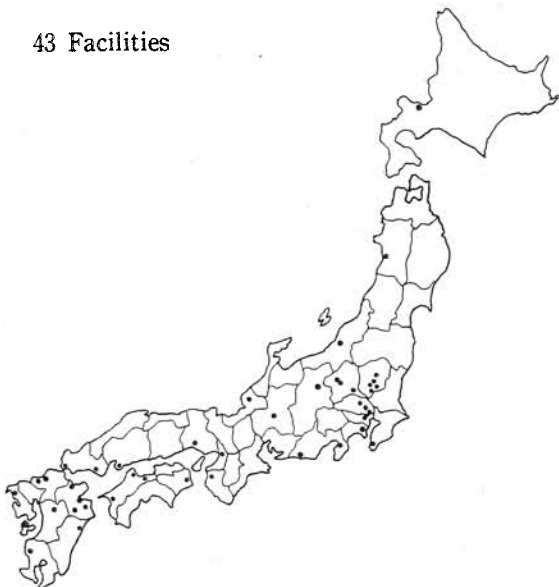


Fig. V-2 Distribution Chart of CMA Hospitals
(As of May, 1974)

43 Facilities



Prompted by this idea formation, the first CMA Hospital was established in Tochigi Prefecture in 1953. From 1960 onward, they sprang up in various places of this country to reach 43 in number now. The number and geographical distribution of the CMA Hospitals by year are given in Table V-1 and Fig. V-1. Also, the number of the JMA members who are connected with one of these hospitals runs up to some 7,000 physicians, or nearly 10% of all physicians belonging to the JMA.

The reasons why the JMA has strongly advocated the establishment of its own hospitals are as follows:

(1) For postgraduate medical training of general practitioners

The curriculum a typical Japanese physician pursues consist of 6 years at the medical faculty of a university as an undergraduate and 5 to 10 years of postgraduate training at a university hospital or a large hospital, upon completion of which he can open his practice in a clinic or a hospital. There are no separate courses for specialists and general practitioners and, therefore, most general practitioners are equipped with the knowledge and skills of a specialist or a semi-specialist.

The large hospitals in which these general practitioners are trained, however, are very exclusive, and once the physicians leave the hospitals, their ties with them are severed almost completely. Of course, one of the key requirements of a good physician is life-long education. If several physicians jointly establish a hospital, it can furnish them with

a place to practice group diagnosis from their respective fields of specialization, and can thus keep up the metabolism and selectivity of medicine and medical technology.

(2) For the continuity and consistency of medical care

General practitioners play the part of the threshold to medical treatment for the residents of a community. Each physician has his patients and he is well informed of in their bodily and mental traits, domestic, social, financial and other circumstances. However, when a patient is found in need of a specialist's examination and treatment, he must be sent to a hospital, in which case the practitioner's contact with the patient is completely lost. This is obviously an unhappy situation both for the patient and his family doctor when judged from the standpoint of the consistency of treatment. The CMA Hospital affords the general practitioners a common ground to work in, and enables the all-important consistency and continuity of treatment to be maintained between the general practitioner and his patients if they have to be hospitalized for specialized treatment. Then, the practitioner can visit the CMA Hospital in the afternoon and discharge fully his duties as attending physician.

(3) For comprehensive medical care

From around 1950 the concept of medical care began to be expanded to embrace not only the conventional diagnosis and treatment but the whole spectrum of medical services, ranging from promotion of health, prevention and early finding of diseases, diagnosis and treatment, and rehabilitation. And the CMA hospital is particularly important as an organ to provide this comprehensive medical care as is being abundantly demonstrated by its activities compared with those of other hospitals.

A comprehensive medical care is to be mapped out on the basis of the clarification and analysis of the natural and social conditions of the community, and be put into practice by the members of a medical association, working in close cooperation with each other, with the CMA Hospital as nucleus. Conversely, this will be achieved only by the association members who are solidly attached to the community.

The community health activities of a CMA Hospital include adult health, vaccination, anti-cancer measures, anti-TB measures, health of the aged, first aid, school health, medical care in rural areas, anti-pollution measures, infant health, health education, anti-calamity measures, mental hygiene, maternal health and ten-odd other items.

Established by the reasons and for the purposes as outlined above, the CMA Hospitals are achieving better results year after year. Indeed, conscientious activities in many aspects of community medical care of the medical association members are being appreciated increasingly by local residents as well as local autonomous body whose financial aid to the hospital is increasing steadily.

It is expected that the functions of the CMA Hospitals will become more and more diversified and expanded so as to better provide for the

specific needs of the communities they serve. A case in point is the Almeida Hospital as set up by the Oita City Medical Association. The plan has recently been worked out for completely systematized medical care for the entire Oita Prefecture for implementation at an early date, with the said hospital at the center and all the medical association members participating.

3. Clinical Examination Centers established by Community Medical Associations (CMA Centers)

Modern diagnostics will never be complete without information from clinical laboratory testing.

Up until the end of the last century, diagnostics consisted of the physical examinations of percussin, auscultation and palpation, which are a kind of sensory tests, and the questioning which collects relevant information directly from the patient. What characterizes the diagnostics of this century is perhaps the addition of an entirely new type of information, as distinct from the conventional one, that has been made available by the clinical laboratory tests and the development of electronics.

Like the impact of the radar on many other fields, the introduction and development of clinical laboratory testing is going to play a vital role in the present-day and future medicine.

(1) Start of the CMA Centers

After World War II, medicine and medical care in Japan have undergone a tremendous transformation from their prewar statuses under the influence of the rationalistic and quantity-oriented medicine of the U.S.

In large hospitals, requests for clinical examination increased so much that departmental testing capacity soon became inadequate. And the centralization of scattered testing facilities in a hospital began around 1955.

Meanwhile, general practitioners, with the exception of a limited number of very progressive ones, were at a loss how to accept this newly-introduced clinical examinations.

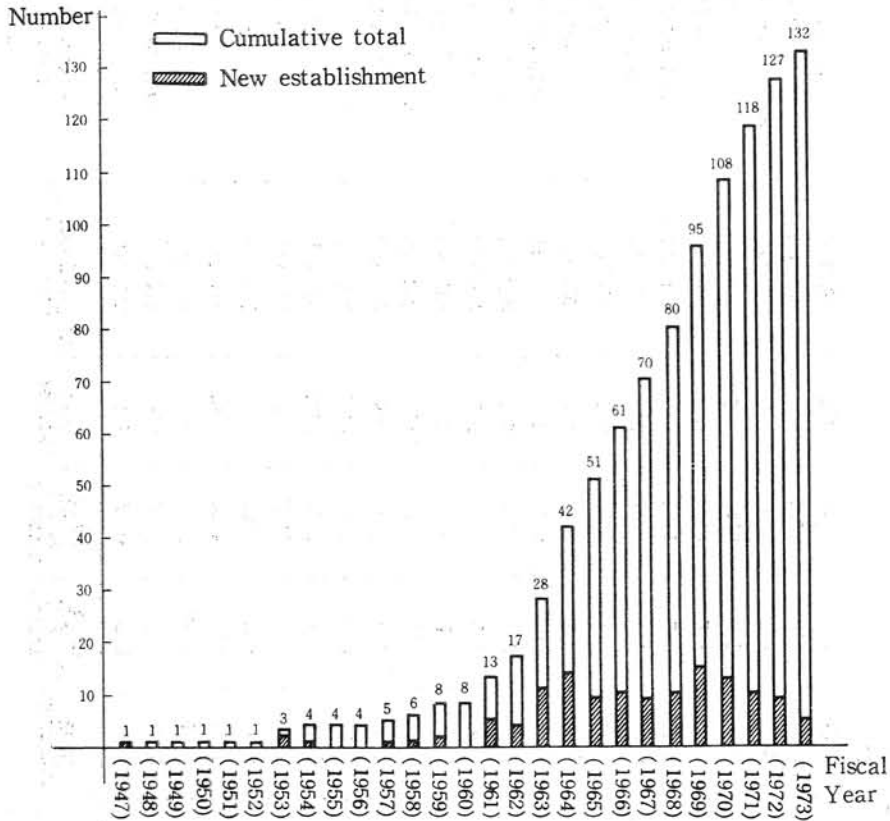
Nor were they financially capable of having proper clinical laboratories at their own hospitals or clinics.

As early as July, 1950, Dr. Taro Takemi, then vice-president of the JMA, advocated the establishment at an earliest possible date of CMA Hospitals and CMA Centers.

He foresaw the absolute necessity of improving the competence of general practitioners and of developing closer relations between them and community medical care.

When he returned to the JMA as President in 1957, however, there

Fig. V-3 Change in Number of CMA Centers by Years



were only 5 CMA Centers operated by medical associations.

The number kept increasing but gradually up until 1960, when the Medical Care Facilities Finance Corporation was established on the recommendation of the JMA. As is to be expected, it greatly facilitated the new establishment of centers, and at the end of fiscal 1974 there were a total of 132 CMA Centers across the country. (Fig. V-3)

The geographical distribution of CMA Centers is as shown in Fig. V-4.

(2) Activities of CMA Centers

Table V-1 gives the percentage distribution of the test items at the major clinical examination centers, showing a quickly rising importance of clinical chemical tests in recent years.

Fig. V-5 gives the extent of the utilization of the centers by member physicians.

The progress of these centers is in a sense a faithful reflection of the standard of practicing physicians, and is consequently indicative of

Table V-1 Percentage Distribution of Survey Items at Major Facilities—1973
(Facilities making more than 300,000 manual tests a year.)

Name of Facilities	No. of Survey Items per Year	General Test	Hematological Tests	Bacteriological Tests	Serologic Tests	Clinical Chemical Tests	Pathological Tests	Cytodiagnostic Tests	Other Tests	Physiological Tests	Radio-logical Tests
Hakodate City	504,865	4.1	22.0	3.2	5.7	63.6	0.2	1.1	—	—	—
Hachinohe City	323,185	9.5	20.4	3.2	9.3	48.2	—	—	9.4	—	—
Miyagi Pref.	647,502	4.8	7.2	24.1	15.9	42.3	0.1	1.5	—	0.9	3.3
Urawa City	336,412	19.3	21.5	5.9	12.0	40.1	—	—	0.6	—	0.6
Nerima-ku	631,818	26.7	13.5	2.9	6.6	38.3	0.3	0.2	—	1.4	10.3
Kita-ku	428,750	2.8	22.5	3.4	9.9	61.4	—	—	—	—	—
Edogawa-ku	450,629	17.8	13.7	1.9	13.6	47.7	—	0.8	—	1.7	2.8
Joetsu	341,503	66.3	6.6	0.2	1.7	19.6	—	2.1	0.4	1.8	1.3
Toyama City	528,435	4.9	18.1	4.0	9.3	61.5	0.3	0.4	0.8	0.2	0.6
Matsumoto City	336,583	3.1	4.3	1.2	8.8	54.0	0.1	0.1	—	0.7	27.7
Handa City	438,769	11.0	11.9	2.9	11.0	58.8	0.3	0.5	—	3.7	—
Nagoya City	1,518,552	2.6	6.8	2.3	6.2	80.1	0.4	0.5	—	0.4	0.7
Toyonaka City	319,579	21.6	19.7	2.0	7.4	48.9	0.1	0.3	—	—	—
Moriguchi City	347,736	0.3	8.4	—	14.7	76.7	—	—	—	—	—
Kobe City	896,825	3.4	14.9	4.6	9.4	65.5	—	—	—	1.4	0.8
Nara City	496,139	17.8	15.4	3.0	10.7	31.6	—	0.6	0.1	0.3	20.5
Okayama City	436,626	8.3	13.0	3.5	13.9	54.6	0.3	2.1	—	4.2	0.1
Hiroshima City	1,501,103	1.6	12.4	2.9	10.7	71.5	0.3	0.4	—	0.1	0.1
Matsuyama	344,883	5.9	9.2	2.7	6.3	72.0	0.3	1.2	—	1.1	1.3
Izuka	313,416	3.1	4.5	2.3	9.9	64.2	0.1	0.3	—	1.1	14.5
Kita-kyushu Central	498,068	1.3	8.5	2.2	7.0	66.7	0.2	1.5	—	0.1	12.4
Saga Pref.	376,128	4.6	14.2	3.4	8.9	67.9	0.2	0.2	—	0.7	—
Nagasaki City	364,280	3.0	24.6	2.1	10.8	57.1	0.3	1.2	—	0.5	0.5
Kagoshima City	651,476	2.5	12.7	5.8	7.8	69.9	0.3	0.3	—	0.1	0.5
Total	25,668,256	10.4	14.3	3.7	9.9	57.3	0.2	0.5	0.4	0.7	2.7

Fig. V-4 Distribution Chart of CMA Centers
(As of March, 1974)

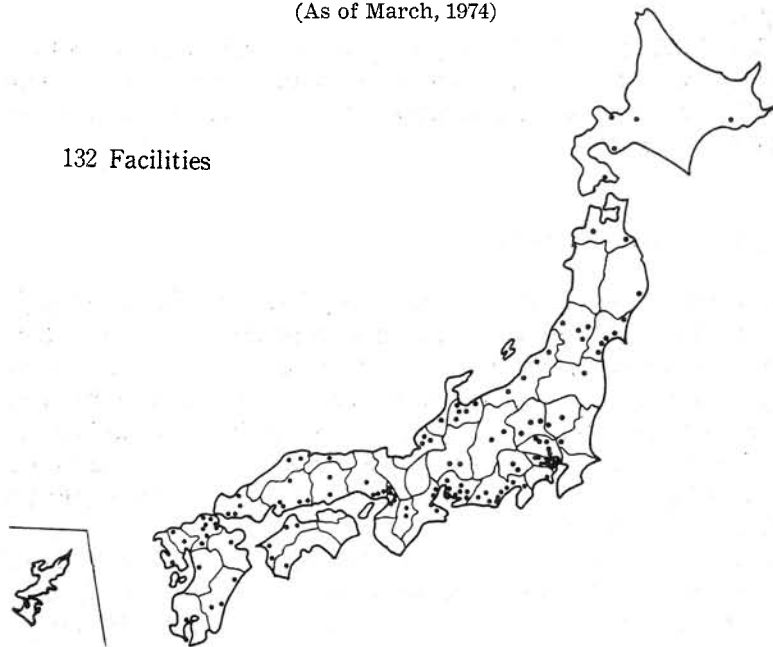
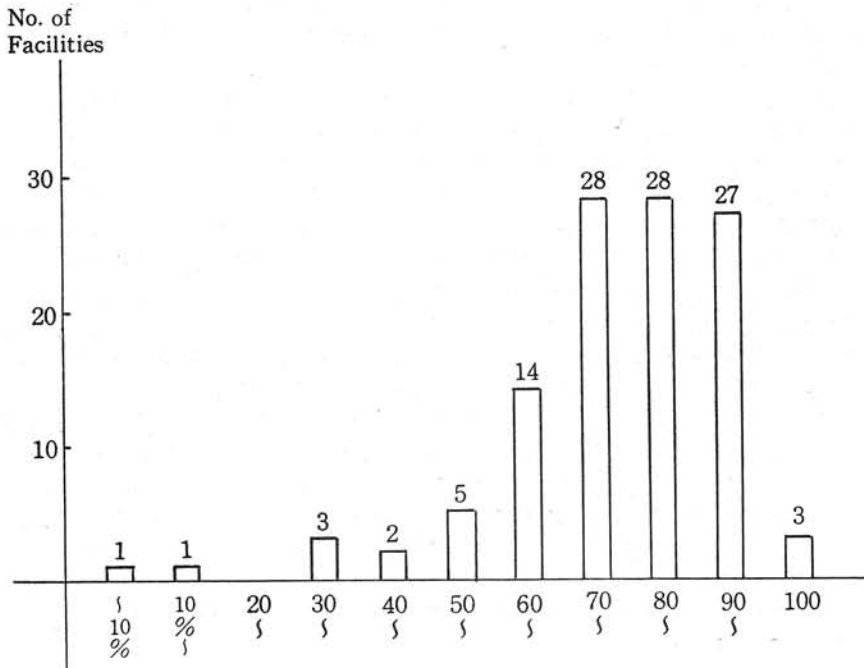


Fig. V-5 Utilization of the CMA Center by the Member Physicians
of the Medical Association



their contribution toward the promotion of health of the community people.

The JMA conducts annually a quality control survey for all of these centers, the results of which show that their quality level is improving steadily, now comparing favorably with the level of the like facilities of university hospitals.

4. Quality Control Survey

In prewar Japan, diagnosis was largely based on questioning, percussion, auscultation and palpation, at times supplemented by selected tests chosen by individual physicians. After the end of the war, however, a great variety of novel laboratory tests were introduced one after another.

Since around 1954, the so-called "human dock" checkup has come to be put into practice. A unique Japanese idea, this is to perform multi-phased checkups on individual persons as likened to an ocean-going vessel back from a long voyage being docked.

A year or so later, the idea of centralizing into an integrated clinical laboratory of separate testing rooms at an hospital came to be taken up in earnest, while the JMA started to push forward the establishment by each medical association a clinical examination center and a hospital of its own as facilities for joint use by all its members. By now, such centers number more than 180, widely distributed throughout the country. And these centers are performing not only tests for patients but also clarification of the pathologic physiology of the communities through various medical care activities there.

As is well known, the clinical laboratory testing has brought to the conventional diagnostic system an entirely new type of information. But inaccuracy and scottering in such information can at once lead to an erroneous diagnosis and treatment. And it is obvious that "master's art"-type judgment of test results is very dangerous. The logical conclusion is, therefore, that the idea of QC (quality control) should be introduced.

Indeed, it was a world-wide trend. Here in Japan, the Law for Clinical Laboratory Technicians and Health Laboratory Technicians was promulgated in 1958, and laboratory tests came to be conducted more and more by such technicians under the direction of a physician.

The JMT (The Japanese Journal of Medical Technology) started its quality control survey in 1962, and in 1963 a university hospital survey was made. In the JMA, Dr. Hitoshi Hara (then a member of the Board of Trustees), Dr. Masayuki Saito (currently a professor at the Medical Faculty, Kitasato University) and others on the CMA Center Committee pointed out the urgent need for a quality control survey and put it into practice in 1967 at CMA Hospitals, CMA Centers and some university and national hospitals.

Table V-2 Change in Numbers of Subject Facilities of the Quality Control Survey

	1967	1968	1969	1970	1971	1972	1973	1974
No. of Facilities	70	121	167	224	409	435	483	607

Furthermore, the JMA formed in 1968 the Quality Control Survey Committee to conduct a detailed study of this matter, participated in by clinical pathologists, chemists, laboratory technicians, mathematicians, computer experts as well as members of the board of trustees in each medical association concerned.

The annual numbers of subject facilities of the quality control survey are given Tab. V-2.

Following the revision of the Law in 1971, the JMA has been entrusted by the Ministry of Health and Welfare with the quality control survey for the health laboratories, registered with the Ministry and engaging exclusively in laboratory examinations.

Since 1974, the scope of the subject establishments of the JMA quality control survey has been so enlarged that it can also cover part of the general medical establishments with laboratory test facilities.

In that year, the JMA survey was conducted at a total of 607 establishments, and the number is anticipated to top 1,000 in 1975.

Results of the 1974 survey, done in great detail involving the use of the computer and various correlation analysis, and other statistical techniques, are compiled in a 160-page report.

The survey items for 1974, which are changed each year, were as follows:

1. Time: October, 1974

2. Survey Items:

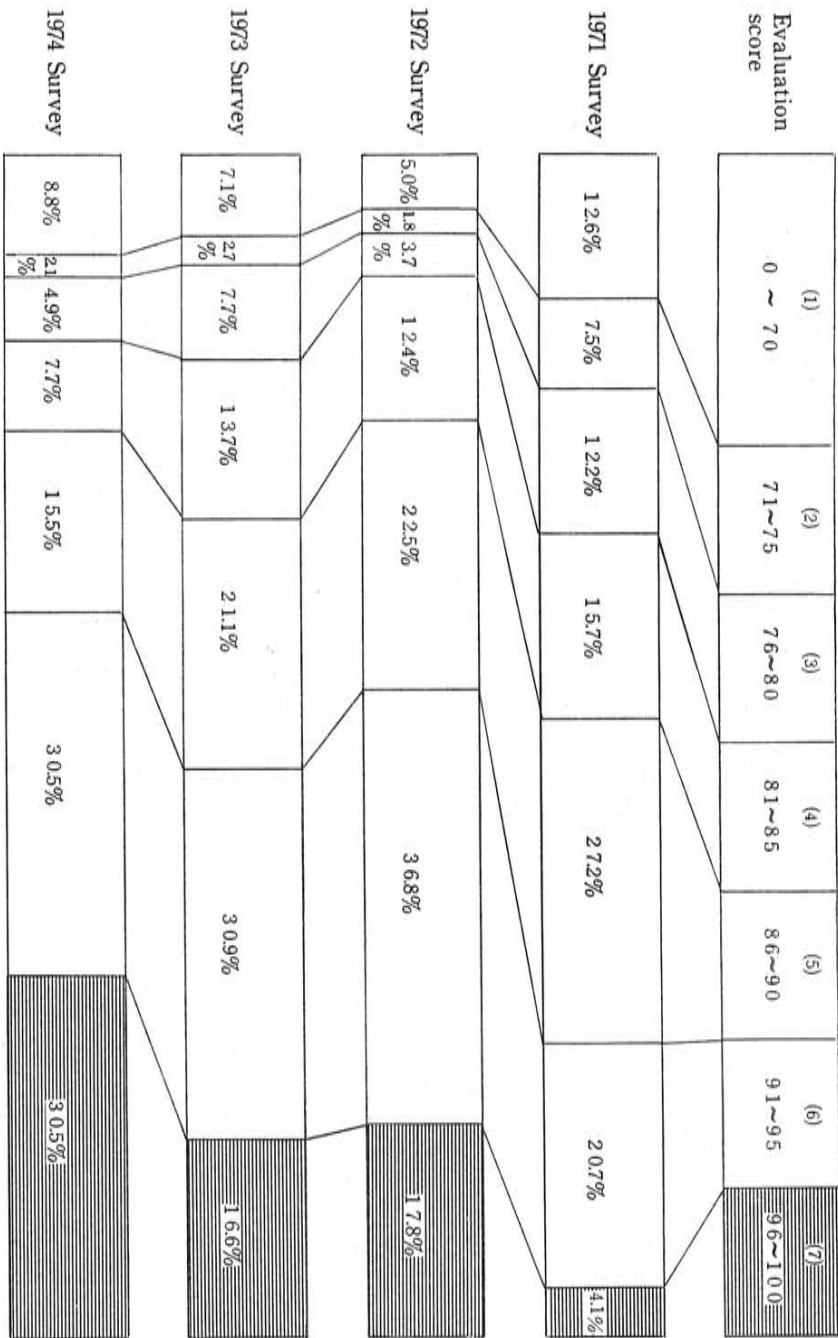
I. Required test items—1. total bilirubin, 2. urea nitrogen, 3. cholesterol, 4. glucose, 5. sodium, 6. potassium, 7. chloride, 8. total albumin, 9. alkaline phosphatase, 10. GOT, 11. amylase, 12. hemoglobin, 13. ABO blood group screening, 14. Rho (D) blood group screening, 15. serum reaction for syphilis, 16. ASLO, 17. quantitative determination of urine sugar, 18. quantitative determination of urine protein, 19. identification of bacteria and 20. sensitivity test.

II. Elective test items—1. creatinine, 2. uric acid, 3. calcium, 4. inorganic phosphorus, 5. protein quotient, 6. LDH, 7. neutral fat and 8. serum iron.

3. Charges:

a. Required test items	¥7,000 (\$23.30)
b. All items	¥10,000 (\$33.33)

Fig. V-6 The Score of Japan Medical Association's Survey (II)



The surveys kept showing better and better results each time they were repeated, the 1974 results being that about 75% of all the establishments surveyed scored marks better than 90.

While these surveys serve to make all those concerned realize the importance of quality controls, they are being followed by a post-survey meeting of the responsible technicians, experts and others for a follow-up study and guidance. How effective this meeting it is well illustrated by the fact that a few establishments which in a certain were found with facilities not up to the standards ranked among the top ten in the following year.

VI. HEALTH ACTIVITIES

1. Health Education

“Systematization of Medical Care and Health Education,” which is one of the main items on the activities program of the JMA, is based on the belief that the fullest benefits of systematization cannot be obtained unless health education is improved to a certain level.

Accordingly, an expert committee has been formed within the JMA to review the health education activities in the past, to clarify the aims and targets of such activities and to work out a concrete plan of action.

So far, the JMA has often held training courses for health education supervisors to develop as many qualified personnel as possible and to inform them of our policies.

At the same time, the improvement and utilization of our audiovisual film library as educational media are being pushed through such efforts as equipping each prefectural medical association with an 8 mm cartridge projector and distribution of a list of cartridges available so as to facilitate the educational activities of prefectural medical associations. They are also requested to hold health education meetings and to energetically carry on health activities that take into account the particular circumstances of each community.

2. Local Community Health Council and Health Activities

As soon as Dr. Takemi was installed as president of the JMA in 1957, he included in its activities program the strengthening of community activities in spite of the pressures of business following his appointment. In July of that year, the president decided on the necessity of community activities with medical associations as nucleus, their basic concept and concrete measures to be taken. And the decisions were conveyed to all local medical associations through the prefectural medical associations for their cooperation.

This was founded on the basic idea that “no true medical care can exist apart from the community” and that “the medical associations are responsible for the health of the community residents,” these principles remaining unchanged up to the present.

To be concrete, we aim to establish a comprehensive medical care system for the community residents by the medical association concerned, acting as an independent body, which will carry out various health activities needed, feeding back to the JMA the problems, measures proposed and taken, and results obtained and assessed.

In April 1959, President Takemi read his paper, entitled "Duties of General Practitioners in Japan" at a round-table conference of the officers of the World Medical Association then visiting Japan and those of the JMA. The paper stressed the importance of the following duties:

- (1) Health control and prevention and treatment of diseases of all members of a family as family doctor.
- (2) Community public health services.
- (3) Health education for community residents.
- (4) Cooperation with CMA hospitals and CMA centers.

In 1960, the Medical Care Facilities Finance Corporation was established, resulting in greatly expedited the establishment of CMA hospitals and CMA centers. Today, such facilities number as many as 179 scattered all over this country. They are fulfilling their functions very well, and perhaps even better in the future, as footholds for community health activities in each area.

In order to put into practice and further expand the activities as recommended in the (1963) report by the National Committee for the Improvement of Medical Care System of Japan, Ministry of Health and Welfare, the JMA decided in July 1965 to set up local community health council. And we are since urging our local associations to form such councils, providing them with necessary guidance and other forms of aid.

The local community health council as advocated by the JMA is composed of representatives from 1) local governments, 2) health centers, 3) educational and research institutes, 4) community people and 5) medical facilities. These medical representatives consist of specialists in various fields of medicine and have the final say so far as the academic aspect of community medical care is concerned. Thus, this committee, as the central body for community medical care, discusses various problems bearing on community health, decides and puts into practice necessary measures and assesses the results obtained. In place of the one-way and bureaucratic directions under the centralized system of administration in the past, this committee can to catch the voices of people as reflecting the needs of the community and administer various measures to satisfy them by taking into account the particular condition of each community. In these activities, the medical association undertakes the greatest share as leader in academic and specialized matters.

According to a survey conducted by the JMA in 1971, there were 14 local community health councils at the prefectural level and 168 such councils established for other areas, each pushing forward a comprehensive community health plan for the ultimate end of elevating the health standards of the people living there.

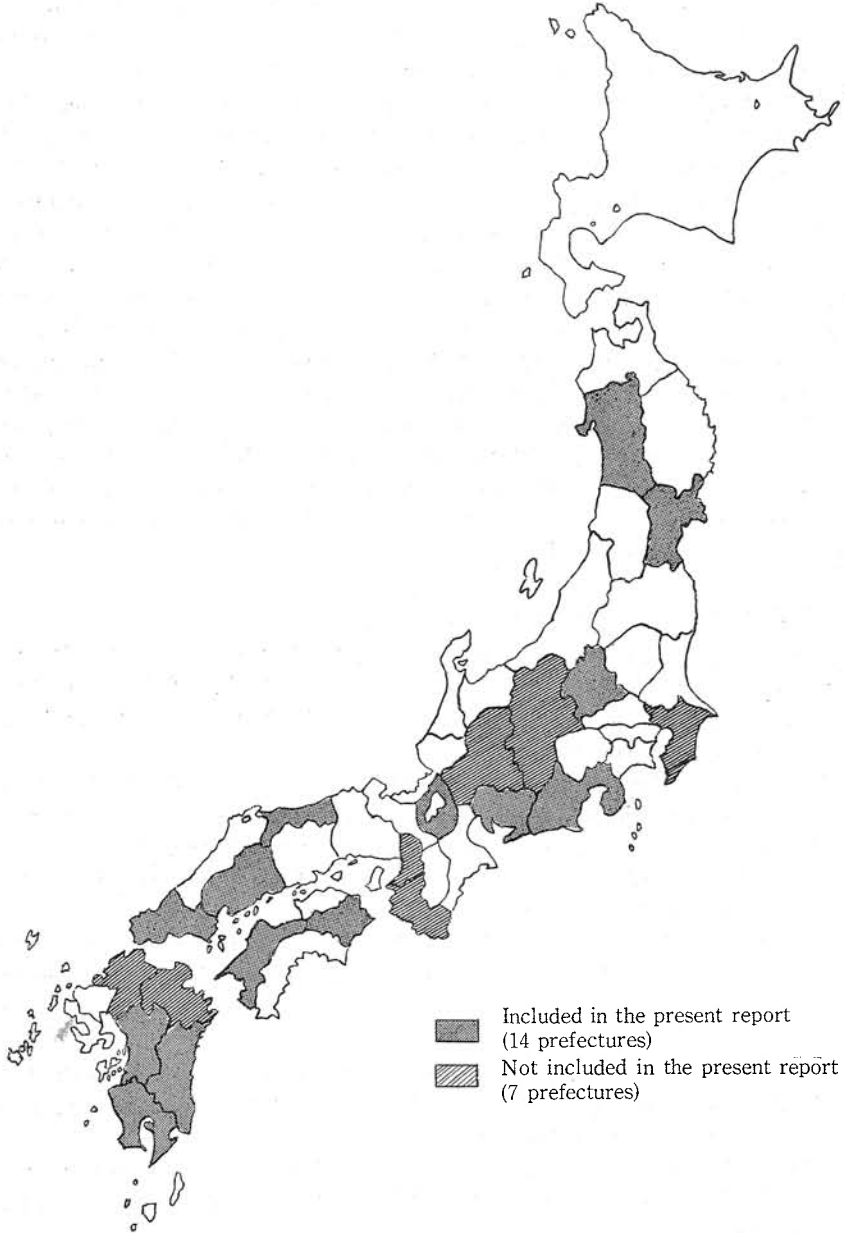
The number of this councils has continued to increase steadily thereafter, by now (1975) perhaps topping the 200 mark.

The main items of its activities include immunizations, adult health, school health, health education, anti-cancer programs, health of the aged,

Fig. VI-1 Distribution of Local Community Health Councils Organized by County, City and Ward Medical Associations



Fig. VI-2 Distribution of Local Community Health Councils Organized by Prefectural Medical Associations



infant health, first aid, mother-and-child health, and research and investigation.

This means that the medical activities of physicians are not confined to the medical examination and treatment rooms or laboratories, but they are being expanded to the open field of the community as well for the purpose of putting into practice comprehensive medical care.

Indeed, this shows the direction of true medical care as it should be.

In 1968, the JMA inaugurated the Computer Committee to study the part to be played by the computer in medical care and its systematization. Also, committee on the Community Medical Care and the Community Medical Care Facilities are now taking up the possible application of the systems engineering technology though they are somewhat critical of the indiscriminate introduction of systems engineering technology to medical care at its present stage of development. Instead, this committee is tackling from the ecological standpoint the problems of the development and allocation of medical care resources for systematized community medical care from the three approaches of medical personnel, physical materials and the area. Thus, they are attempting to make the community medical care system emerge out of its present, long-neglected condition and further grow into one of a higher order, that is, a human and flexible system with ample alternatives and redundancy.

1) Mother-and-Child Health Activities

The infant death rate in Japan, which stood at 60 per 1,000 births in 1950, improved to 18.5 by 1965 and further to 11.4 by 1974. The birth rate, which was 28.1 per 1,000 population in 1950, became 18.6 and 19.4 in 1965 and 1974, respectively.

The marked decrease in infant death rate is a result of the social application of the progress of medicine and may justly be taken as a record of achievement by the medical associations. For instance, the local community health councils are making great efforts toward, among many other things, bringing it down to "zero."

Government health authorities are taking up as a priority item in the nation's mother-and-infant health program the breast-feeding movement, which we have long been advocated and we are giving our cooperation to the promotion of the movement.

The health examination of infants is being carried out in a systematic way by the local medical associations in close collaboration with the local authorities concerned to achieve the purpose.

The health examination of 3-years-old children, whose important purpose is checking on their mental health is also one of the activities of the local medical associations.

The maternal death rate (among pregnant and postpartum women) in this country is showing very satisfactory improvement—from 17.6 per 10,000 live births in 1950 to 5.2 in 1970 and further down to 3.8 in 1974

or to about one-fourth of the 1950 figure.

Today, deliveries in hospitals, clinics and maternity homes account for 97.8% of all deliveries, the remaining 2.2% accounting for deliveries at home. And this is an important factor contributing to the greatly reduced maternal death rate.

Another important factor in this respect is the health examination of pregnant women by the physicians designated under the Eugenics and Maternal Protection Law at the prefectural level.

Early detections of gestational toxicosis, adequate medication and treatment as well as post-delivery guidance by the designated physicians are no less instrumental in the remarkable progress in this connection.

Classes for mothers, being held at many places in this country, give expectant mothers appropriate guidance on childbirth and nursing. In these classes, the film library for health education as mentioned elsewhere is being made use of and 8 mm cartridges, including "Expectant Mothers and Health Examinations," "Daily Life during Pregnancy" "Foods and Nutrition during Pregnancy" and "Childbirth," are available. Also, such educational pamphlets as "How to Handle Newborn," "Birth of Human Being," "Exercises for Infant," etc, are distributed.

2) Old People's Health Activities

Since the general and detailed health examinations of old people were made statutory duties in 1966, the prefectural, county, city and ward medical associations are cooperating in their complete implementation.

The fact is, however, that JMA has been advocating since 10 years ago establishment of an old age insurance system for the total care of the aged, thereby to cope with the aggravating problems of old people. Dilly-dallying to no purpose, however, the Government is still unable to achieve a drastic reform of the nation's medical care system. There is lately emerging within the government health authorities, however are now awakening to this problem and there are indications of a new interest to tackle it as a national task.

3. School Health Activities

In recognition of the fact that the school ages are the best years for education in a man's life, JMA is pushing strenuously its school health activities as a link in a chain of its community medical care program. While we are thus attaching increasingly greater importance to the health education and community health education in school in connection with the life-long education of the people, we give necessary instructions to the school health committee of each prefectural medical association for concerted efforts on all fronts.

Each year, the JMA holds training courses and a general assembly

for school physicians we also organize symposium to be participated in by all those interested in school health, including principals, teachers in charge of health, teachers in general, and PTA representatives as well as school physicians.

To bring to light the actual conditions of school health activities in a community, a 3-year field survey has begun in Kushikino City, Kyushu, as a joint project between the Kagoshima Prefectural Government, Kagoshima Prefectural Medical Association, Kushikino City Office and Kushikino City Medical Association. The findings of this survey will be applied to all the rest of this country to contribute to the betterment of school health.

4. Industrial Health Activities

The development of industry in this highly industrialized age is at the same time bringing about various new health problems. And the importance of industrial health activities is growing with years.

The JMA is stepping up its activities in this field, enlisting the efforts of both full-time and part-time physicians at industrial establishments. Each prefectural medical association has formed its industrial medicine committee to respond to the activities of the JMA.

5. Family Planning

1) Population Problem

As of 1973, Japan had a population of 108.7 million, ranking sixth among all the world countries. This figure is to be compared with about 60 million of 50 years ago, and 72 million in 1945 when World War II ended. Since then, its population has continued to increase steadily.

The annual increase rate of population of the Asian countries as a whole is at present 2.3%, which is the second highest rate among these of the world continents. And Japan's population growth at 1.3% is the lowest among the Asian nations. Even at this relatively low rate, Japan is to have an annual increment of about 1.3 million, and its population 50 years hence is estimated to be 140 million.

It would be no easy task for Japan, having a large population within its limited land, to provide the people with adequate housing, public facilities, productive facilities, water sources, farmland, etc. There are many difficult problems Japan has to solve if it is to survive—for instance, how to secure the supplies of various forms of energy and food, which must largely be imported in increasing quantities with the steady population growth expected, how to stop environmental pollutions in the face of the increasing population, etc.

We believe that some effective measures should be taken to arrest this upward trend of population in Japan as well as in many other countries of the world.

At the meeting of the United Nations World Population Conference held in Rumania last August and the World Medical Assembly held in Sweden last September, the necessity of achieving a "stationary population" was emphasized. We must point out, however, that the argument does not seem to have taken into consideration the possible risk of the dysgenic effect such a population policy would have on the human race at that time. Nor do we think it desirable that the State should introduce a population policy to put pressures upon the family planning of individual people. Discussion of Japan's population problems, therefore, must be made by taking these two points into consideration.

The population problem of Japan has two salient features. One is the decreasing population of people in the working age. An important factor responsible for this is the rapid rise in the number of youths receiving higher education than before. Those who seek to find work immediately after completion of compulsory education (9 years) are now fewer than 20% of the total graduates. The other trend is an increasing ratio of the aged people. With the development of preventive medicine and of prophylaxis for adult diseases, the nation's life expectancy has increased markedly. At present, those over 65 years of age account for 7% of the total population, and this figure is expected to rise to 13.4% by the year 2000.

2) Actual Conditions of Family Planning

During the period of about 10 years up to the end of the war, the government encouraged childbirths as a national policy. And artificial abortion was placed under strict restrictions, while little effort was made to popularize birth control. After the war, however, the situation changed drastically. Various means of birth control were introduced in 1948, and were begun to be put into practice. Also, artificial abortion operation for socio-medical reasons came to be permitted subject to certain conditions.

The sense of crisis from the population pressure is much less acute in Japan than in the other Asian countries, due to the decreasing agrarian population and young workers. Under the circumstances, the basic policy for guidance in family planning places greater emphasis on maternal welfare and family happiness than on any national population policy. For the dissemination of necessary information on birth control, small gatherings are often held at hospitals, clinics or health centers. Guidance through printed matter is another method that is being used widely. Such guidance consists of not only giving information on control techniques but also on the proper age, spacing and frequency of childbirths. Special efforts are being directed toward lowering the average age of the first childbirth.

In Japan, family planning used to be the responsibility of midwives

and health nurses. More recently, however, guidance by obstetrician-gynecologists is becoming more and more prevalent.

An important influence on the history of the family planning in this country is the Eugenics and Maternal Protection Law. It was legislated to meet the social need of the war-devastated Japan, then in the extreme of chaos and poverty, from the standpoint of eugenics, not from considerations of the population problem. It is well-known, however, that the law has in effect brought down the Japanese birth rate significantly. One of the features of this law is that it authorizes an abortion operation "in case where the mother's health may be injured seriously for some economic reason." This clause, therefore, means abortion is not an unconditional operation for the sake of social adaptation. And the Japanese law may be said a little more restrictive than those of the U.S., Britain and the East European countries.

Another feature of the law is that it requires an abortion to be performed by "a physician designated by law." This designation is made by each prefectural medical association from among the specialists with high technical skills and character. The decision on whether a particular individual needs an operation rests with the designated physician.

Incidentally, the number of abortion operations has decreased considerably of late due to the spread of birth control.

3) Birth Control Methods

Contraceptive techniques as used by Japanese women are as shown in Tab. VI-1.

Tab. VI-1 Contraceptive Techniques as Used by Japanese Women
Multi-selection(%)

Condom	68.1	Vaginal tablet	7.1	Sterilization operation	5.4
Rhythm method	33.9	Coitus interruptus	6.9	Pessary	4.3
IUD	7.2	Jelly	6.4	Pill	1.7

As is clear from the above, the condom and the rhythm methods are the most frequently employed techniques.

As for the IUD (intrauterine device), it has been used on a trial basis for over 20 years, the "Ohta ring" made of polyethylene being well-known. Last year, the Government approved the manufacture and sale of the "Ohta ring" and "Yuse ring" on condition that the insertion and removal of the IUD be done with great caution by a specialist.

Oral contraceptives or pills are not allowed for sale as such at pharmacies or drugstores. In the report on side effects of oral contraceptives made in 1970 by the Central Executive Committee of the International

Planned Parenthood Federation, these drugs are not claimed to be absolutely free from side effects.

Oral contraceptives not only cause thromboembolia and hypertension but are considered in need of a long-term study on the suspected change in the endocrinal system due to an ingestion of hormones in large quantities. Considering that public opinion is rather critical regarding the side effects of drugs in Japan, they will not come to be sold at pharmacies or drugstores at least for some time yet.

At present, oral contraceptives are prescribed by specialists and are given to women for whom this method is necessary and only when it could be administered under supervision by a competent physician and periodic checks are possible.

VII. VARIOUS COURSES

The JMA gives various training courses for the benefit of and better communication with its members as outlined below:

1. The Social Insurance Leaders' Course

Since 1961 a universal insurance system has been in force in Japan. And the JMA is holding an annual training course for leaders of the social insurance system, participated in by representatives from all the prefectural medical associations who would be the leaders. Included in the program of this course are some recent developments in basic and clinical medicine as well as administrative topics, as furnished by the Ministry of Health and Welfare, so as to equip the participants with the academic knowledge needed for a better discharging of their duties.

The medical theme taken up in the 1974 course was "Adjustments of a Living Body," while "The Immunological System" is scheduled for this year's course. These lectures are to be published as a part of the life-long education series.

With medicine and social science combined, this course is hoped to achieve a breakthrough in the deadlocked health insurance plan, and at the same time to serve an educational purpose.

2. The Industrial Medicine Course

The progress of the industrialized society of today is bringing with it various health problems, complicated and difficult of solution. On the other hand, there remain many fields of occupational and other diseases yet to be investigated. To meet this situation, the JMA is holding a lecture course for industrial physicians to enhance their level. This year's was the 7th such course. The JMA certificate is conferred on the participants, who are exempted from the written test in the qualification examination for labor health consultant.

3. The Course for Leaders on Family Planning and Eugenics and Maternal Protection Law

This course is held annually to provide the physicians designated under the law with up-to-date knowledge on family planning and information on various problems relating to eugenic and artificial abortion operations, thereby to ensure proper enforcement of the law.

Those who attend this course are representatives from the prefectural medical associations who are capable of conducting a sub-course, that is, a communicative course at the prefectural level for all the designated physicians in the area.

4. The School Health Course

The JMA attaches great importance to school health activities and accordingly holds the school health course, particularly for the purpose of consolidating the academic foundations for such activities.

Participants are executive members of board of trustees of prefectural medical associations, who are in charge of school health, and school physicians who are members of the JMA.

VIII. PUBLIC INFORMATION AND PUBLICATION ACTIVITIES

1. The Journal of the Japan Medical Association

Published twice monthly, circulation 100,000 copies for distribution among all members of the JMA

As an organ of the JMA, this journal consists of two parts concerning progress in medicine and medical administration. For the progress in medicine part, reports on studies in the fields of basic and clinical medicine are included, while the stenographic records of the proceedings of the Board of Trustees meetings are given in the part concerning medical administration. Making the proceedings at Board meetings open is an unusual practice. But we do this in order to enable all our members to consider and judge matters from the position of the Board and at the same time grasp the true intention of the JMA by supplying them with all the up-to-date information. Records of various courses and symposiums held by the JMA are also included for the interest of those unable to attend them.

2. The JMA News

Published twice monthly, circulation 120,000 copies for distribution among all members of the JMA, government agencies concerned, the press and opinion leaders

This is being published for the express purpose of publicizing speedily and effectively the views and contentions of the JMA. Since it was first published on September 20, 1961, this publication has already had more than 300 issues, and is well read among all the JMA members, while prefectural medical associations are making use of it for their publicity purposes.

3. The Yearbook of National Medical Care

As the "White Paper on Medical Profession" by the JMA, the first Yearbook of National Medical Care was published in March, 1964, the latest volume available being the 11th edition.

This book covers a wide range of subjects related to the national medical care from medicine and medical art to medical care security, medical economics, etc., and is intended not only for clinical practitioners but also for the general public. In this sense, it serves as a common ground

for both the physician and a lay person can think about the problems of our medical care. It also attempts to show our medical care system as it should be and the direction in which it should proceed in the light of what President Takemi calls the theory of human survival, thereby to provide clues for solving various problems.

Thus, this book represents the result of the establishment of the academic basis of the JMA and as such has come to be valued highly here in Japan and abroad.

The subtitle of each annual edition indicates the theme for the basic research activities of a particular year and reflects the state of affairs of the nation's medical care. Titles and subtitles of the past editions are:

- 1964 Edition—Present Conditions and Historical Review of National Medical Care
- 1965 Edition—Problems among the State Administrative System, Medical Care System and Social Security (advocating health investments in relation to the proper siting of welfare facilities)
- 1966 Edition—The Road to Advanced National Medical Care (systematization of health investments and the theory of location on welfare)
- 1967 Edition—Health Investments and the Theory of Location on Welfare (in search of new directions to connect medical welfare with social economics)
- 1968 Edition—A Drastic Reform of the Health Insurance System (proposing the JMA's vision)
- 1969 Edition—The Economic Value of National Medical Care
- 1970 Edition—The Creative Development of National Medical Care
- 1971 Edition—The Concept of Social Security and National Medical Care
- 1972 Edition—National Medical Care as a Key to a Welfare Society
- 1973 Edition—The Basis for the Existence of National Medical Care (in search of medical care in an advanced welfare society)
- 1974 Edition—Order for Human Survival and Medical Care

4. TV Program "The Health Promotion Age"

As a program for the general public, "The Health Promotion Age" is being broadcast on a national network every Sunday since 1961.

It has been on the air more than 700 times to date and now enjoys a surprisingly high audience rating of about 7% for a program of this kind.

Once a twice a month, the JMA offers commentaries on current medical care topics to disseminate opinions of our association.

5. Other JMA Publications

1) Papers on Medical Ethics

To cope with the sudden changes in the social conditions of postwar Japan, it was felt urgently necessary to establish the ethics of the medical profession. Therefore, the JMA set up a Medical Ethics Committee to make an overall study of this matter. This is a collection of papers by the members of the Committee.

2) Progress of Life Science

A special expert committee was formed for new orientations in medicine and medical care, from the standpoint of life science and by integrating the fruit of many specialized studies, a step considered necessary in view of the excessive fragmentation and the consequent lack of coordination. The committee was participated in by experts in the fields of medicine and other branches of science, and their lectures were compiled in this first series. A new series is expected to appear each year.

3) Adjustments of a Living Body

It was often pointed out that "A physician must continue his study all his life." This life-long education of a physician of today is not limited to the medical training in the narrow sense of the word, but should include his health activities as a member of the medical profession of his community. This book is used as a textbook in the social insurance leaders' course, given under the joint sponsorship of the Ministry of Health and Welfare and the JMA, and represents the first series of the life-long education library.

4) Japan Medical Terminology

The standardization of medical terms is one of the basic requisites for the progress of this science. If different terms are arbitrarily, used for the same things by individual users, it will cause confusion and hinder the progress of medicine. The Japanese Association of Medical Sciences, therefore, set up as early as 1940 the "Medical Terminology Standardization Committee" to tackle this matter. After 35 years of untiring efforts, it finally completed this dictionary early this year, having overcome crises of frustration. This dictionary will be found very useful not only by Japanese but also by interested foreigners.

5) Guide to Clinical Laboratory Examinations for Physicians

This is published irregularly to serve as a guide in clinical laboratory examinations and is purchased by many non-member physicians, laboratories and other institutions. This was first published in 1961.

6) Status of Medical Research in Japan

This is published irregularly and in a limited number and shows the status of medical research in the various institutions in Japan. Its first publication was in 1955.

7) For Your Health

This is a publication published irregularly for the general public as part of health education. This was first published in 1965.

8) Asian Medical Journal

Monthly publication in English for doctors in the southeast Asian area. This was first published in 1958 and mainly contains as a feature article an English translation of a feature article in The Journal of The Japan Medical Association and a article concerning medical administration.

9) The Japan Medical Association

A booklet published yearly, containing information about The Japan Medical Association, its structure, officers, activities, outline of medical structure, medical education, medical care, medical facilities, medical publications, medical meetings, etc. This was first published in 1963.

10) Drug Information Cards

These are published irregularly to keep the physicians informed of the drugs, both old and new, reviewed and approved by the Association. The information contained in these cards is reviewed by the Drug Review Committee of the JMA for accuracy, safety, etc. This was started in 1970.

IX. WORKMEN'S ACCIDENT COMPENSATION INSURANCE SYSTEM

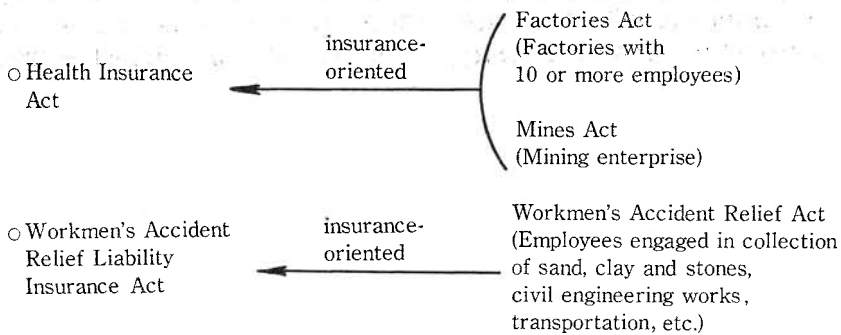
1. Content of Workmen's Accident Compensation Insurance System

(1) Purpose

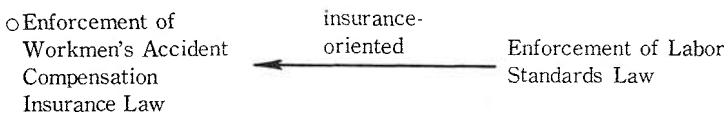
Insurance benefits and insurance facilities are accorded so that prompt and fair relief can be extended to workers injured on the job or while commuting to work and to survivors.

(2) Past history

Prior to August 1947



September 1947



April 1960

Long-term disability and permanent disability, class 1st—3rd, eligible for pension by which a lump sum is replaced.

February 1966

Survivors and the permanently disabled, class 4th—7th, eligible for pension which replaced a one-time lump sum.

November 1970

Improvement of pensions for survivors and disabled persons.

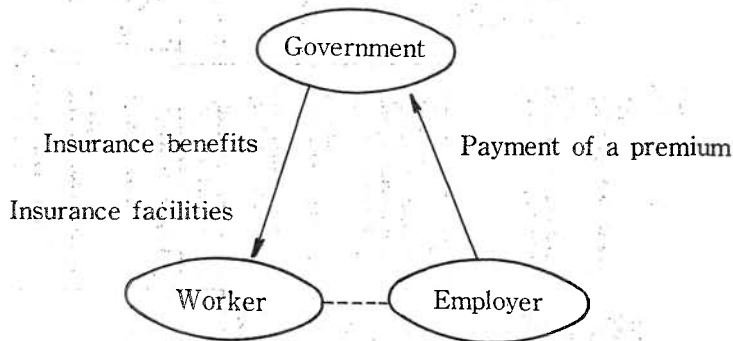
December 1973

Establishment of a system protecting workers injured while commuting to and from work.

November 1974

Improvement of permanent disability benefits and pensions for survivors. Establishment of special supplementary grant system.

(3) Framework



Exemption from accident compensation liability

(4) Persons covered

Employees of firms with 5 or more employees, and in industrial or highly hazardous employment. (From April 1975, almost all of employees are covered.) However, seamen, personnel of the so-called three public corporations and civil service personnel are excluded (they are covered by a special system).

(5) Insurance benefits and insurance facilities

(See attached Fig. IX-1)

(6) Insurance premium

Premium rate 4/1000—89/1000 (of payroll)
(including 1/1000 for commutation accidents)

(7) Government subsidy

For fiscal 1974 ¥1,950,000,000

2. Present State of Workmen's Accident Compensation Insurance System

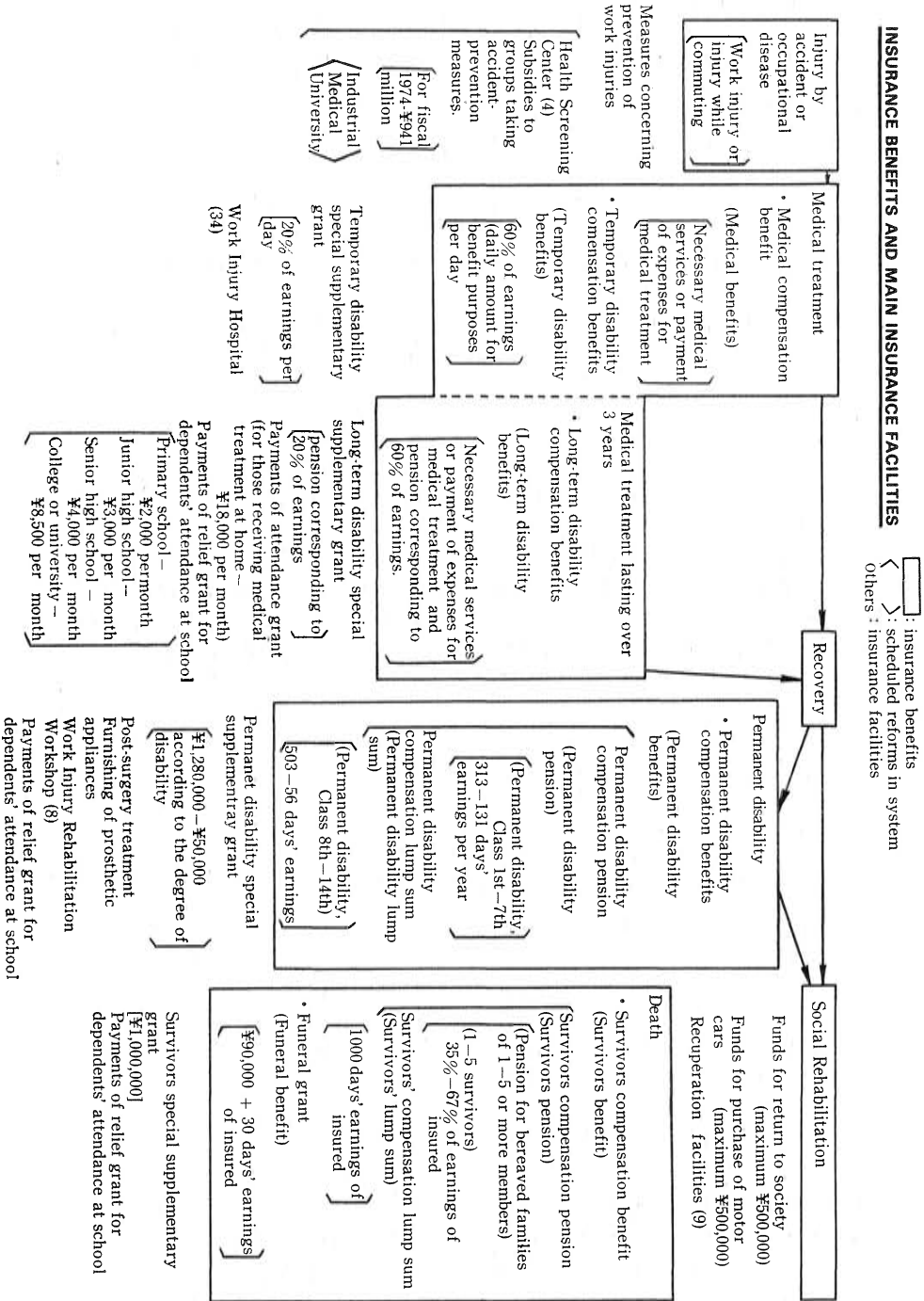
1) Coverage and Payments

(1) Coverage

As of 31 March 1974, the number of enterprises covered by this system, totalled 1,530,000. This figure shows an increase of 150,000 enterprises over the previous fiscal year (10.6%). The number of workers employed in these enterprises was 29,560,000, or an increase of 1,700,000 persons over the previous fiscal year (6.1%).

Fig. IX-1

INSURANCE BENEFITS AND MAIN INSURANCE FACILITIES



(2) Payments of insurance benefits

- a. Payments of insurance benefits for fiscal 1973 totalled ¥183,000 million, or an increase of ¥22,000 million (13.6%) over the previous year.
- b. When we examine payments of insurance benefits classified according to type of benefits, we find that medical compensation benefit were the highest, with a figure of ¥67,900 million (37.1%). This was followed by temporary disability compensation benefit with a figure of ¥45,400 million (24.8%), payments of pensions with a figure of ¥37,900 million (20.7%), payments of permanent disability compensation lump sums, with a figure of ¥28,100 million (15.4%), survivors' compensation lump sums, with a figure of ¥2,800 million (1.5%) and finally, payments of funeral grants, with a figure of ¥900 million (0.5%).
- c. The number of persons newly eligible for benefits totalled 1,370,000 in fiscal 1973.

2) Outline of Insurance Facilities

(1) Purpose

In order for an injured workman to return to society and to his job as soon as possible after having been cured, many kinds of insurance facilities, apart from insurance benefits, are made available to him whenever occasion demands. A portion of this task is undertaken by Labor Welfare Corporation. (public corporation).

a. Facilities operated by Labor Welfare Corporation.

(a) Construction and administration of facilities

Work injury hospitals, specially designated hospital wards, a rehabilitation college, an artificial limb center for injured workmen, rehabilitation workshops for injured workmen, recuperation facilities.

(b) Administration of system

- * Loaning of funds for rehabilitation (limit ¥500,000)
- * Loaning of funds for purchase of motorcars (limit ¥500,000)
- * Payment of relief grant for injured workmen
 - Vocation relief grant (limit ¥200,000)
 - Relief grant for medical care (for the hospitalized—¥18,000 per month; for out-patients ¥6,000—¥5,000 according to the number of days of hospital attendance)

b. Facilities undertaken by Prefectural Labor Standards Offices, etc.

- * Diagnosis and treatment after surgical operations.
- * Furnishing of prosthetic appliances including artificial limbs.
- * Recuperation at hot-springs.
- * After-care for those whose spinal cords are seriously injured.
- * After-care and other measures for those who are suffering from toxicosis as a result of carbon monoxide poisoning in coal mines. (After-care and payment of attendance grant depending on the

state of care given, ¥18,000 or ¥13,500 or ¥9,000 per month.)

- * Attendance grant (In the case of those who are receiving medial treatment over a protracted period at home requiring constant care, ¥18,000 per month.)
- * Relief grant for dependents' attendance at school (primary school ¥2,000, junior high school ¥3,000, senior high school ¥4,000, college or university ¥8,500 per capita per month).

X. MEDICAL CARE FOR PATIENTS WITH ENVIRONMENTAL POLLUTION-RELATED DISEASE

1. Introduction

The problems of the human environment has become a matter of global concern and its deterioration is one of the most crucial problem that Japan has faced. Japan, a small country with an area of 370,000 square kilometers and a population of about 100 millions, enjoyed a high rate of economic growth and industrial expansion in recent years. This high rate of economic growth has, however, had a great and far-reaching impact on all phases of the nation's life, even to the extent of adversely affecting people's health and their living environment.

2. Environmental Pollution-Related Disease in Japan

Ever-growing industrial and human activities have brought a serious air and water pollution in various parts of Japan, mainly in highly industrialized areas. In these areas several kinds of air-or-water pollution-related disease were reported. In areas with severe air pollution such as the Yokohama-Kawasaki area and the Yokkaichi area, the number of patients with an obstructive lung disease has increased as the air quality became worse.

Besides air pollution-related diseases, several kinds of water pollution-related disease occurred in Japan: Minamata disease, Itai-itai disease and chronic arsenic poisoning.

The existence of Minamata disease was first brought to the attention of the public in 1956 in areas around Minamata Bay of Kyushu, the southern-most island of Japan. Extensive epidemiologic, clinical and experimental studies showed that the disease was caused from an intake of a large quantity of seafoods highly contaminated with organic mercury compounds which were accumulated in seafoods. The source of methyl mercury turned out to be a chemical plant which manufactured acetaldehyde and acetic acid by using inorganic mercury as a catalyst. Minamata disease is characterized by an impairment of the central nervous system resulting in various symptoms such as a constriction of the visual field, ataxia, loss of hearing and sensory disturbances. In the case of a fetus, Minamata disease symptoms are similar to those of infantile cerebral paralysis.

It was regrettable that Minamata disease occurred in another area of

Japan—along the Agano River in Niigata Prefecture several years after the cause of Minamata disease was identified. It turned out that the patients suffered from Minamata disease by taking a large amount of polluted fish caught in the Agano River whose water was polluted by organic mercury containing waste discharges from a chemical plant located in the upper basin of the River.

Itai-itai disease is another serious water pollution-related disease. The disease occurred in areas along the Jinzu River of Toyama Prefecture. The disease was first found in 1959 and was named "Itai-itai disease" because the patient suffered from intolerable pain when he moved body and the patient screamed "itai-itai" (ouch-ouch). Following extensive epidemiologic, and clinical studies, the disease turned out to be a type of chronic cadmium poisoning caused by the taking of foods and drinking water contaminated by cadmium, discharged from a zinc mining factory located in the upper basin of the river.

Patients with a chronic arsenic poisoning were found in two areas of Japan: The Toroku area of Miyazaki Prefecture and the Sasagadani area of Shimane Prefecture. The disease was apparently caused by a chronic arsenic poisoning due to water pollution (partially air pollution) associated with arsenic mining activities.

3. Medical Care and Relief Measures of Patients With a Pollution-Related Disease

Local practical physicians in the areas where patients with a pollution-related disease live have provided medical care to the victims. Apart from a regular medical care program under the national health insurance program and other medical insurance programs, there exists a special medical care program for the victims of a pollution-related disease. The special medical program is a part of the National Pollution-related Health Damage Compensation Law (hereinafter called "Compensation Law") which was legislated in September of 1974. The Compensation Law replaced the old law called Law concerning Special Measures for the Relief of Patients with a Pollution-related Disease (hereinafter called "Relief Law"), legislated in February of 1970.

Under the Relief Law, the medical care cost was partially supported by both the local and national governments and polluters, while under the Compensation Law expenses for the medical cost as well as medical care allowance, disability compensation, child compensation allowance and compensation for the bereaved family are fully paid by polluters according to the so-called "Polluter Pays Principle."

Seven kinds of pollution-related diseases are officially recognized as the designated pollution-related diseases: 1) chronic bronchitis, 2) bronchial asthma, 3) asthmatic bronchitis, 4) pulmonary emphysema includ-

ing its complications, 5) Minamata disease, 6) Itai-itai disease and 7) Chronic arsenic poisoning.

Areas with air pollution or water pollution are also officially recognized as designated areas based on environmental and health surveys. As of June, 1975, there were 16 cities or prefectures with a designated area for air pollution and there were 6 prefectures with a designated area for water pollution by methyl mercury, cadmium and arsenic.

Under the Compensation Law, medical records and other related materials of persons with a possible pollution-related disease are reviewed by an official certification committee and only certified patients are eligible for receiving compensation benefits including medical care. The number of certified patients as of March, 1975 is shown in Table X-1.

Tab. X-1 Number of Certified Patients with a Pollution-related Disease
(As of March, 1975)

Designated Disease	Number of Certified Patients		
	Alive	Deceased	Total
Chronic bronchitis, Broncheal asthma, Asthmatic bronchitis, Pulmonary emphysema and its complications	19,340	616	19,956
Minamata disease	1,200	88	1,288
Itai-itai disease	70	34	104
Chronic Arsenic Poisoning	55	2	57
Total	20,665	740	21,405

4. Comments

It is usually difficult to prove a cause-effect relationship between environmental pollution and health damage. This is especially so in the case of the relationship between air pollution and chronic obstructive lung diseases which could occur in the absence of air pollution. Hence, judicial solution would not be obtained easily and it usually takes a long time before a solution. The Special Relief Law was an emergency administrative measure taken by the government to provide prompt relief to the victims of pollution-related disease. The Relief Law which had characteristics of social security was replaced by the Compensation Law which has characteristics of compensation for pollution-related health damage caused by polluters. The latter law is considered to be beneficial for the victims with an air pollution-related health damage because it is difficult for them to file a lawsuit because of difficulties in identifying polluters.

This would not be, however, the best measure for providing medical

care or other relief measures to the pollution-related victims. The best measure is, of course, the elimination of the causes of the disease—environmental pollution which may disturb the entire ecological system.

The JMA has been cooperating with the government in providing the best medical care to the pollution-related victims under the special medical care program, while the JMA considers that the environmental pollution-related problems should be solved from a point of view of the environmental science and human ecology.

XI. WELFARE MEASURE FOR PHYSICIANS

Welfare measure for the self-employed physicians is a matter which the physicians themselves must take care of.

The JMA has been promoting the physicians' pension system and the utilization of the pension as benefits for scholarship and also measures against disasters. Along with strengthening and expanding these measures in seeking ideal welfare measures which are to be established by the physicians themselves, an intensive study is being made by a group of experts and physicians to establish a welfare committee.

1. Pension System for Physicians

1) Establishment of a Pension System for Physicians

The sudden changes in the social and economic environment of the old people in postwar Japan have made security for the aged the most important part of the social security program and in this kind of social situation old age pension has been placed in the limelight. Such changes include the extension of life expectancy and the consequent aging of the population, the changing status of the old people in the family with a notable trend toward nuclear families, increase of geriatric diseases, and the problem of adaptation of the old people to the change in employment brought about by drastic economic changes. The government is also trying to perfect and expand this old age pension system and more and more business enterprises are introducing pension plans of one form or another.

It is natural for physicians, who are responsible for the health and life of the people, to be concerned about the welfare of the old people and at the same time have a great concern for their own welfare. The reasons for this concern are as follows:

- (1) In spite of the fact that the physicians are engaged in a profession where they are in contact with their patients every day and are thus exposed to the dangers of disease and infection, in the case of private practitioners, this medical security is covered only by the national health insurance for physicians, which is by no means adequate, as is often pointed out.
- (2) In most cases, the education of the physicians' children is different from other professions because the physicians usually have their offspring succeed their profession. Compared with the parents of the students in other fields, the burden on the physician is heavy and is more prolonged. Therefore, it becomes essential for the physicians to give priority to the expenses for the university education of their children

when allocating their income for expenses.

- (3) In spite of the constantly stressed public nature of the medical profession, there are naturally no particular social measures taken by the government and also by the enterprises. Therefore, they must prepare for their old age by themselves.

Despite the constantly stressed public nature of the medical profession, there have been no measures taken in regard to the guarantee of livelihood for the physicians themselves in old age. The physicians must, on their own responsibility, establish a system to protect themselves in order to develop as professionals in a free society and prepare from their younger days to accumulate funds for livelihood in old age. However, for this a system of livelihood security for old age by the mutual aid of the physicians as a group must be established in preparation for old-age security.

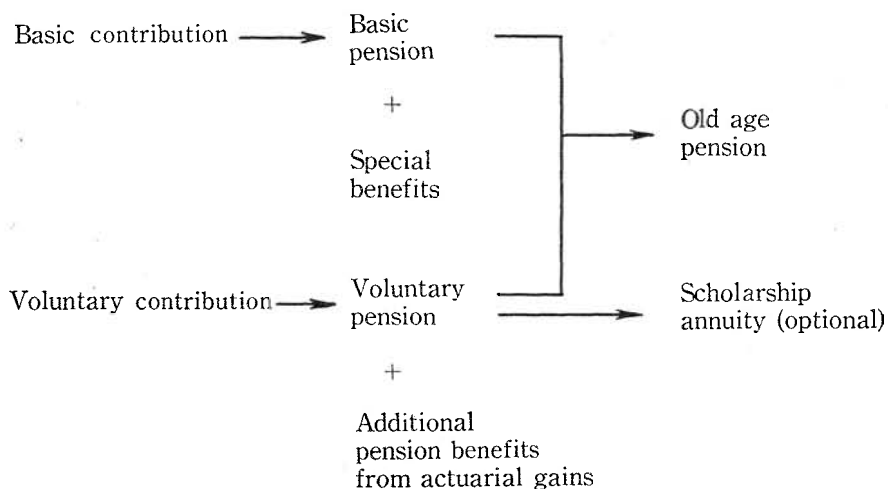
From the standpoint of the welfare of the physicians and expansion and reproduction of the medical profession, the JMA, feeling acutely the need for planning a pension system adapted to the life cycle of the physician, established the Physicians' Pension System Preparatory Committee, which included men of learning and experience. This committee, after making surveys and studies, established a pension system which is nearly perfect and unparalleled in the world. To establish this pension system, it required 6 years of preparation. The JMA is convinced that this system is a necessary economic measure to make the physicians what they should be ideally as professionals in a free society.

Seven years have passed since this system was inaugurated in October 1968 and during this period the interest shown by the JMA members toward this system is deepening year by year and as of this moment the number of subscribers has risen to 41,000 (beneficiaries number about 4,500). The accumulated fund amounts to an astonishing figure of more than ¥35,000 million yen (\$117 million), showing an enormous growth as a private fund, and is rated highly by the related pension industries as a pension system for a profession.

2) Outline of the pension system

Under this system, by the mutual aid of the physicians as a group, the pension is paid to the beneficiaries for lifetime and the amount of the pension being decided freely by the subscriber according to his wish so as to be appropriate to him as a professional person.

This system has as its pillar the old age pension and is combined with the scholarship annuity. The old age pension is composed of the basic pension to which every subscriber subscribes and the voluntary pension which is optional. The voluntary pension when necessity arises, can be utilized as converted to the scholarship annuity for the subscriber's offspring.



(1) Subscription

The physicians eligible for subscription are the JMA members not older than 56 at the time of the first contribution. Subscription is accepted at any time of the year.

(2) Withdrawal

The physicians who have ceased to be a member of JMA or those who have applied for withdrawal from the pension system for some special reasons may withdraw from the system, subject to the approval of the Board of Trustees. Other than the above, no voluntary withdrawal from the system will be recognized.

(3) Contribution

There are three methods of paying the premium—monthly, annual and one-time payment—one of which the subscribers must choose.

Tab. XI-1 Amount of Basic and Voluntary Contribution

Amount of Basic Contribution		Amount of Voluntary Contribution	
Monthly	¥4,000 (\$13.3)	Monthly	1 unit ¥2,000 (\$6.6) × any integral number
Annual	¥46,000 (\$153.3)		
One-time Payment	According to the age of the subscriber as shown on Table XI-1	Temporary Contribution	1 unit ¥50,000 (\$166.6) × any integral number

(4) Benefits

a. Old age pension

The old age pension is paid to the subscriber for life on and after reaching the age of 65. This pension is composed of the basic benefits corresponding to the amount of contribution he has paid plus the “volun-

Table XI-2 Monthly Amounts of the Basic Contribution and Basic Pension by Age

Age	Basic Pension			Basic Monthly Pension
	Monthly	Annual	One-time Payment	
Over 25	¥4,000 (\$13.3)	¥46,000 (\$153.3)	¥780,000(\$2,600)	About ¥67,500(\$225)
" 30	"	"	¥748,000(\$2,493)	" ¥48,900(\$163)
" 35	"	"	¥706,000(\$2,353)	" ¥34,800(\$116)
" 40	"	"	¥652,000(\$2,173)	" ¥24,100(\$80.3)
" 45	"	"	¥581,000(\$1,936)	" ¥16,000(\$53.3)
" 50	"	"	¥488,000(\$1,626)	" ¥10,000(\$33.3)
" 55	"	"	¥366,000(\$1,220)	" ¥5,500(\$18.3)

tary" benefits corresponding to the amount of the "voluntary" contribution he has paid. The amount of the pension is to correspond to the amount of the respective contributions he has paid up to the time of the beginning of the payment of the benefits.

To the beneficiaries of over 56 years of age who were especially allowed to participate at the time this system was inaugurated, according to the provisions of the pension system, special benefits are to be granted as supplementary ones. (special benefits)

To those who have paid the contributions for over 3 years and who are in need of the pension for reasons such as illness or other unavoidable circumstances, old age pension at a reduced rate may be granted after the subscriber reaches the age of 60. (reduced pension)

b. Scholarship annuity

As to the additional part of the old age pension, either a part or the entire part of this pension may be granted in installments as scholarship annuity for the subscriber's children for a period of 4, 7 or 10 years, as specified by the beneficiary.

With regard to the amount of the pension in this case, an appropriate calculation will be made according to the time of the payment of the pension, duration of payment and the resources from the voluntary contributions.

The scholarship annuity can be divided and paid to more than one child. Also, it can be paid continuously even in the case of the death of the subscriber or the beneficiary.

c. Survivor's pension

The period of payment of old age pension is for life, and in case the subscriber dies before the 10-year period after he becomes eligible for the pension the payment of the pension is guaranteed for 10 years. Therefore, in case the beneficiary dies before the end of this 10-year period an amount equal to that of the pension the subscriber would

receive if he were living is paid to his surviving family for the period of 10 years less the number of years during which the beneficiary received the pension. The survivor may receive the pension in a single payment.

d. One-time payment to the survivor

In the case of the death of the subscriber before he becomes eligible for the pension, an amount corresponding to the sum of the premium paid by him plus an interest of 5.5% per annum is paid to his survivor.

e. One-time payment on withdrawal

In the case of the withdrawal of the subscriber due to unavoidable circumstances such as giving up his medical practice, etc., an amount corresponding to the sum of the premium paid by him plus an interest of 5.5% per annum is returned to him.

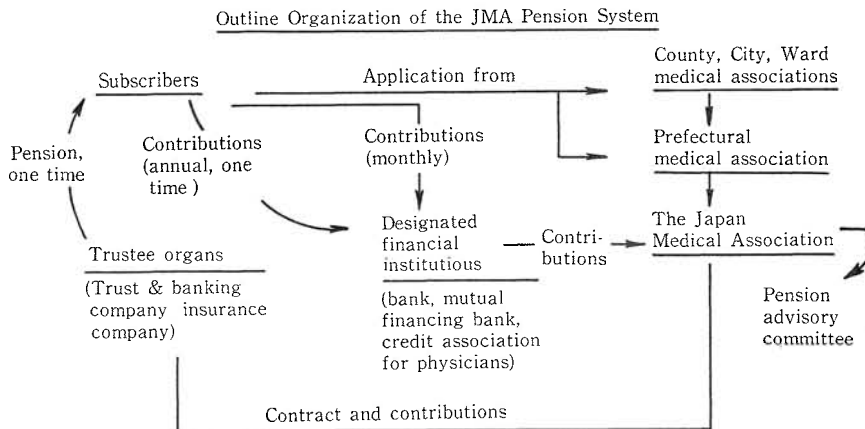
(5) Deferment of Payment of Pension

When so requested by the subscriber, the beginning of the pension payment may be deferred, and during this period he is considered a subscriber.

This period of deferment should not extend 5 years and the subscriber is to choose the period and make the request to the JMA. The JMA will not recognize any changes once the request is made and approved. During the period of deferment, the subscriber may pay his contribution, but he can not make the payment monthly automatically through the bank. He has to make the payment through the bank or the post-office.

When the period of deferment ends, the pension, which is increased according to the length of the period of deferment, the amount of pension at the time the period of deferment ends and the amount of the contribution paid, is paid for lifetime.

Fig. XI-1 Outline of the JMA Pension System



(6) Handling of Contributions and Benefits

This system incorporates both the trust fund and insurance. Contributions made by the subscribers, less a negligible amount of 50 yen for clerical expenses, are all appropriated as contributions to the trust fund and insurance.

(7) Management of Funds

By the provisions of the pension system the premium paid by the subscribers and the income gain are all appropriated exclusively for the purpose of this pension system and can not be used for other purposes nor be used as security. Also the custody and management of the funds are entrusted with the most reliable financial institutions.

(8) Management of the Pension System

The Board of Trustees of the JMA is responsible for the administration of this system and the Physicians' Pension Committee is established as the advisory organ. The Board of Trustees always refers matters concerning the administration of this system to this committee and respects the report of the committee's recommendations. This committee consists of 2 members of the Board of Trustees of the JMA, 2 members (president and a vice president) of The Japanese Association of Medical Sciences (JAMS), 4 men of learning and experience and 8 physicians representing the subscribers.

XII. THE PHYSICIAN'S LIABILITY IN JAPAN

An Outline and A Basic Principle of the Legal Dealing With Disputes about Medical Accidents

1. Summary; Specially about medical professional legal insurance

The number of disputes between physicians and patients caused by medical accidents is showing a sharp increase in Japan. The amount of compensation is also rising substantially in line with the increased limit on the indemnification awarded in the event of traffic accident fatalities.

Disputes about medical accidents may be resolved either in court or by direct negotiation between the parties concerned. When a settlement by a civil suit is chosen, however, the tendency has emerged recently for the court to decide against the physician even when the medical accident can only be viewed as having been medically beyond the control of the physician. This means that the decisions are being made with priority placed on the need to provide financial aid to the injured party. Moreover, in the case of an out-of-court settlement or direct negotiation, even when the medical accident is not recognized as being due to the physician's fault, demand for a large sum of compensation is made by the patient by putting strong pressures psychologically on the physician. In view of the tendency of this nature, in settling a medical dispute it is necessary to maintain the principle strongly that when a physician is at fault he should clearly bear the liability for compensation and when he is not at fault he will not be held accountable. On July 1, 1973, the JMA newly established the system of dealing with disputes, which was combined with the professional liability insurance plan. In this system, the JMA concluded a liability insurance contract with a group of insurance companies, the insured being all the members of the JMA (Premium per annum for each member is 10,000 yen). And at the same time, the judgment of physician's negligence is entrusted to the Deliberation Council which is composed of ten leading authorities in the field of jurisprudence and medical science. The function of this Council is to deliberate on whether the physician is liable for compensation in a medical accident brought before this Council by the members of the JMA from all over Japan, and the insurance companies are to respect mostly this Council's decision. Whenever the Deliberation Council judges that the physician is liable for the payment of compensation and the amount of indemnification exceeds one million yen, the portion exceeding that sum (maximum insurance money is 100 million yen) and legal expense are to be covered by the insurance. If the physician is judged by the Council to be not liable, an explanation is made to the patient regarding the decision and no compensation is

made to the patient. In the event that the patient is dissatisfied, the results of a lawsuit are awaited rather than to seek an easy compromise.

From July 1973 through December 1974, a period of a year and a half, the Deliberation Council deliberated on 184 cases. In about half of the cases it was judged that there was negligence on the part of the physician, and most of these cases have now been settled by the payment of indemnification under the insurance contract.

2. The Trend of the Legal Dealing with Disputes about Medical Accidents; Background of the Birth of the JMA's Medical Professional Liability Insurance

There are no special acts relating to the civil or penal liability of the doctor in Japan. And so civil liability is judged by the general regulations on tort and penal liability by the general regulations on accidental homicide and infliction of injuries in the performance of one's business. As a result, it may be said that the feature of the doctor's liability is embossed by the case law of court and by settlements of medical association.

1) Trends in Case Law

The number of suits involving physicians' civil liability and penal liability has been on the increase since 1960, with especially striking increases since 1970. According to statistics compiled by the Supreme Court, there were about 100 suits brought annually between 1970 and 1973 for civil liability alone. As of 1973, approximately 500 cases were pending before the courts. The accidents involved in these cases covered the entire range of medical services, including diagnosis, operation, injection, transfusion, anesthesia, medication, and patient care, etc. At the same time as the number of cases has risen, so has the amount of damages claimed by plaintiffs. Decisions by courts, show that awards in excess of ¥10 million have recently become dominant. Plaintiffs are currently winning about half of their suits.

In these cases, the question of whether there was any fault in the physician is disputed as the crucial matter, in civil suit or criminal case. But especially in civil liability cases, the courts have shown a trend toward drawing the conclusion that the physician is at fault by (i) demanding greater care in the part of the physician, (ii) presumption of fault from the causal relationship between the physician's act and the accident, and (iii) shifting the burden of proof of fault through treating malpractice as a breach of contract. However, if such suits are decided merely through legal technicalities and without reference to actual medical practice, there is the danger that the judicial decision may become divorced from medical judgment and thereby prove unconvincing. Perhaps as a result of such a criticism from JMA and others, the courts have begun to show an

awareness of this danger and there is an increasing tendency to render legal judgments on fault with direct relevance to medical standards. Nevertheless, there is still the fear that shortcomings within current legal proceedings, and particularly the rigidity of the expert witness system, may prevent medical judgments from receiving adequate attention in court.

The handling of suits concerning medical accidents is now at an important crossroads. For its part, the JMA is doing everything possible to see that proper medical judgments are reflected in court decisions.

2) Trends in Out-of-court Settlements, Especially Those by Medical Associations

(1) Outline

Not all disputes about medical accidents are brought to court. Rather, those which are settled in court are but the tip of the iceberg. In fact, the general trend in Japan is to prefer out-of-court settlements to litigation, and this is also true of medical cases. As a result, it may be said that such out-of-court dealings are even more significant than are judicial precedents, and the Medical Association is playing an active role in this field. In the 1960s the foundation was laid for handling such disputes in keeping with each area's local situation when the Prefectural Medical Associations voluntarily established Dispute Settlement Committees in all of Japan's 46 prefectures. This was further developed in the 1970s as the JMA conducted a review, surveying the results of this decade's handling of disputes by the Prefectural Medical Associations in order to rectify the system's shortcomings and reinforce it. At the same time, as a nationwide united mechanism to handle disputes, the JMA's Medical Professional Liability Insurance System, was established to begin operation in July of 1973. At present, it is no exaggeration to say that virtually all disputes against practitioners are now handled through this system, except those that have become lawsuits.

(2) Handling of Disputes by Prefectural Medical Associations

Statistics on the handling of disputes by the Prefectural Medical Associations until 1970 are found in the results of surveys reported by the JMA. The total number of disputes handled by all Prefectural Medical Associations came to 1,640. Of these, 33% concerned injection, 24% operation, 9% diagnosis, 8% patient care, 7% anesthesia, and 2% medication. Of the total of 1,640, mediation by the Dispute Settlement Committees was successful in solving 63%. Until 1970, an overwhelming 87% of the settlements involving indemnification payments were for awards of less than ¥1,000,000. As may be seen, the prefectural committees have played an important role in settling medical disputes.

Under this System, the Dispute Settlement Committee of a Prefectural Medical Association, upon receiving a report of an accident from a member, took full responsibility for settling the dispute as the member physician's

representative. At the same time, it was hoped that the Dispute Settlement Committee would act not simply to represent the physician but as a fair and impartial arbiter in each case.

But, medical professional liability insurance being easily offered by a private insurance company since 1963 gradually came to be adopted by the Dispute Settlement Committees of the Prefectural Medical Associations, and by 1970 it was being used by 70% of the Prefectural Associations. As a result, the iron rule to judge whether or not there was a physician's fault, on the basis of an appropriate medical judgment was forgotten, a quick resort to financial settlements was made, and the Dispute Settlement Committees began to act as proxy assessment organizations for the private insurance company. Because such settlements are a perversion of justice and it would serve neither the physician's interests nor provide true redress to the injured party, the JMA's Medical Professional Liability Insurance System was established in an attempt to rectify the situation.

3. Dispute Settlement with the JMA's Medical Professional Liability Insurance*

As noted above, the JMA's Medical Professional Liability Insurance System was established and went into operation in July of 1973 to correct the failings of dispute settlements by the Prefectural Medical Associations and also to guide the court. While this system utilizes private insurance companies' liability insurance with maximum insurance money set at 100 million yen, to ensure that the physician is economically able to bear the burden of expensive indemnification payments, it has several features not found in other insurance systems.

To begin with, it is conducted on a nationwide scale by the JMA, attempting on its own to fulfill the responsibilities which it has as the main provider of medical care for the people. Under this system, only regular members of the JMA qualify as the insured (so that this insurance does not come into play when a claim is made against the government, a local self-governing body or a corporation, owing to an accident in a hospital administrated by it) and the JMA is the policy holder, policy contracts being concluded between the JMA and the four most reliable private insurance companies.

The second feature of this system is that, although it utilizes the Prefectural Medical Associations' Dispute Settlement Committees, these are incorporated as an integral part of the system such that after they put the cases that have arisen in order, the cases are then studied by the Investigation Committee which is composed of members from the JMA and the Tokyo Marine Insurance Company (the leader of the four insurance

* Please refer to the "Guidebook of this Insurance for members of the JMA" in the annex.

companies) and sent to the Deliberation Council for its decision. This Deliberation Council is composed of leading medical and legal authorities in Japan (total 10 persons: 2 professors of internal medicine, 1 professor of surgery, 1 professor of obstetrics and gynecology, 2 professors of legal medicine, 2 professors of civil law, 2 advocates), who give each case a strict medical assessment and just legal evaluation to determine fairly the existence or non-existence of the physician's negligence. In most cases the insurance companies respect the Council's decision and work to settle the problem along the lines of the Decision with the cooperation of the JMA and the Prefectural Medical Association concerned. When these efforts fail to produce a settlement, the results of a lawsuit are awaited rather than to seek an easy compromise. Yet the heart of the system is the presence of the Deliberation Council, and it is a feature without a parallel anywhere. Because of this Council, it may be said that the system considers more than simply the physician's interests. Not only is the question of liability decided fairly by the Deliberation Council but the physician, found to be negligent, must pay the first ¥1 million in indemnification from his own funds (not insurance money).

Very briefly put, it may be said that in this system "deliberative mechanisms" and "economic security" are organically combined by the JMA as the mainstay of medical care for the people. Under this system, it has been possible to effect that balance between medical judgments and legal judgments that are likely to be missed by the courts, as noted in Chapter 2-1), and to avoid the trend toward the physician's subservience to insurance companies as pointed out in Chapter 2-2)-(2).

In this regard, it may be useful to outline briefly the cases handled from the beginning of the system in July of 1973 until the end of 1974. During this year and a half, the Deliberation Council deliberated 184 cases. The percentage breakdown by cause showed operation 34%, injection 24% (of which 90% were subcutaneous, intramuscular, or intravenous), diagnosis 12% (evenly divided among internal, surgical, and laboratory tests), patient care 12%, anesthesia 9%, medication 5%, and others 5%.

Physician's negligence was found by the Deliberation Council in about half of the cases and not in the other half. Efforts are now being made to settle these cases in keeping with the Deliberation Council's judgments, and already 60% of those in which negligence was found have been settled, 26% of these involving the payment of indemnification of ¥10 million or more. However, approximately 30% of 184 cases are pending, despite the Deliberation Council's judgment, and are awaiting court decisions.

Based upon the results of a year and a half of activities, the system may be said to be well established and achieving its purposes. The system is setting an example of how medical disputes should be settled and is providing guidance for the courts in their efforts. JMA is confident that this system will continue to play an important role in the just resolution of disputes involving physicians.

4. Proposals to the World Medical Association

As seen above, JMA has taken the initiative in the settlement of medical disputes, and we would like next to mention a few points from our experience which may be interest to the Professional Liability Committee.

(1) In trying to settle a dispute, efforts must be made to maintain a posture of assessing fault or non-fault on the basis of a detached medical judgment, keeping always in mind the prevailing medical standards. Accordingly, it is necessary to conduct continuing reviews and clarifications of medical standards, at least for important cases of treatment. This will also serve to prevent the occurrence of disputes.

It may also be necessary here to study medical standards from the international perspective. For example, in Japan there have recently been media uproads and patient groups formed over retinopathy of prematurity and contracture of the quadriceps muscle resulting from intramuscular injections. Each time these problems arise, the JMA form committees of specialists to exhibit authoritative academic opinions and has consistently sought to settle these disputes within the framework of academic opinion. So we felt a need to exchange data on such situations with other medical associations of the world and to discuss medical standards at the international level.

(2) Although conditions may be different from country to country, it would also be beneficial if all national associations gave serious consideration to what should be done to ensure that medical opinion is reflected in judicial decisions on such problems as mentioned in (1) above. Because the rigidity of the expert witness system makes it difficult for Japanese court to adequately reflect medical opinion, as already pointed out, the JMA is making every effort to rectify such a situation and is studying the need for a specialized court for settling medical disputes.

(3) We also feel it would be well for each national association to consider the role it should play in resolving medical disputes and to establish its own mechanisms for this, although here again the situation is likely to be different in every country. Clarifying the position of the medical association could both influence judicial decisions and spur the government to greater reflection on its proper role. For example, it could stimulate the inauguration of measures to give compensation for the injured when the physician is not at fault.

(ANNEX)

**The Japan Medical Association Guidebook
Medical Professional Liability Insurance
For JMA Members**

July 1st, 1973

FOREWORD

The Articles of General Liability Insurance, Special Clause for JMA Member Physicians, and the Agreement Concerning the Administration of JMA Medical Professional Liability Insurance have now been concluded. Also having been established are the Bylaws of the Liability Deliberation Council and the Regulations Concerning Dispute Settlement Procedures. It gives me great pleasure to make a complete set of these documents available to our members.

One characteristic of the medical malpractice problem is that the passage of time brings about substantial changes in the nature of the problem and the countermeasures best suited for it. Other factors involved are changes in the layman's awareness of the problem, level of technological progress, and problems of paramedical personnel. Therefore, there is the danger of widely divergent views concerning a malpractice case arising from different standpoints.

One fundamental misconception in the handling of medical disputes is the attempt to argue solely on the basis of the outcome. Approaches such as contract theory as jurists term it, if applied ex post facts to reach decisions on medical grievance cases, would not yield just results; a theory governing contract for simple commercial transactions is by nature inapplicable. I believe that pursuing the physician's responsibility on the basis of facts as a breach of contract is fundamentally wrong. Yet, if court judgments being made on such a premise, then it is our duty to attempt to counter it.

Malpractice results in a misfortune for both the patient and the physician. The establishment of a socially fair means of settlement rooted in the principles of democratic society will not only eliminate the source of future problems but also make a contribution to the progress of learning. It should also provide jurists with an opportunity to gain new understanding.

It is from such a standpoint that the JMA is instituting this system of liability compensations which reflects the independent opinions of the JMA and also incorporates the desires of our membership. We urge our

members to keep these materials now being distributed in your files as a valuable source of reference in time of need. Furthermore, acquainting yourself with them beforehand will aid you in both preventing disputes and understanding means of the settlement of disputes. For this reason the procedures to be followed have been drawn up in elaborate detail.

Finally, I should like to gratefully acknowledge the dedicated efforts made by Mr. Kunihiro Mitsufuji, head of the Law-Department, Dr. Tetsuya Matsuura, Executive member of Board of Trustees and the jurists who collaborated with them.

Taro TAKEMI
President,
The Japan Medical Association

I. Basic Principles of the Legal Disposition of Disputes Medical Accidents

In recent years disputes over medical accidents have occurred frequently, and various opinions have been voiced on how they should be handled. But there can be no cure-all for such disputes. Obviously, the most essential course of action is for the physician himself to maintain constant vigilance over his own behavior and to conduct his daily medical activities in a manner that reflects his awareness of his role in medical care. To phrase it differently, the physician must undertake his actual medical duties while faithfully observing medical ethics,—which has reverence for life as its main tenet, and with full recourse to unflagging study and training. By adopting such a stance, the physician does not merely arm himself against accidents; he also fortifies himself against disputes which arise out of loss of trust between patient and physician.

At the same time, the environment within which medical services are given should be improved to enable the physician to maintain such a stance. Many medical disputes of today may be seen as the consequences of defects in the medical system that is unable to keep pace with progress in medicine. A prompt and drastic reform of the medical system is also indispensable for the prevention of accidents.

On the basis of this philosophy, the JMA has taken many measures to enhance medical ethics and reinforce medical education. It has also engaged to the full extent of its ability in fundamentally reforming health insurance and all other medical systems. On this point we need dwell no further here.

How should a physician respond when he is confronted with a dispute which unfortunately does sometimes occur involving a question of malpractice? The 'ideal response' is self-evident. If, after rigorous scrutiny from a medical viewpoint and due legal deliberations, it is determined that the physician was at fault, he should make adequate compensation to

the injured party. When the injury is not deemed to be due to malpractice, the state should come to the aid of the injured.

In actuality, however, such an ideal dispute settlement is not possible. Neither is there an organ qualified to deliberate a physician's liability nor is there a system for the physician to be economically capable of bearing high costs of compensation. The state, moreover, has no relief program for the injured. As a result of these circumstances there is popularized a settlement formula where the physician, without any authoritative judgment on his culpability, is obliged to pay a certain amount of compensation. Repeated application of such a formula, designed merely for a practical settlement removes the reality of settlement further away from the ideal system, and a fundamental reform becomes more difficult. It is not too much to say that the medical care for the people will come to face a serious crisis if this situation is left unattended.

We do not say, however, that in the past this dangerous trend has been met only with indifference and disregard. The truth is that it has been stiffly resisted, especially by vigorous efforts led by prefectural medical associations. But the conclusion of a careful analysis of the situation made by the JMA's Law Committee (medical law, social security legislation committee) is that we have reached a point where countermeasures must be taken on a nationwide footing. If this view is correct, the JMA, as the guardian of the medical care for the people, cannot afford to view the situation impassively. Rather, it must accomplish all that can be accomplished on its own initiative and then bring state policies under scrutiny.

What, then, can be accomplished on the JMA's own initiative? In brief, it is to open the way to entrusting a fair "arbitration organ" with the competence to determine a physician's liability and also to afford the physician economic security so that he can bear the burden of large costs of compensation, both of which constitute a step toward the ideal system. The result of this plan and determination to act was the birth of today's JMA medical professional liability insurance system. Under the system, a liability insurance plan is put to use as the best method to assure the physician's economic security (there is no other means to attain economic security). It also consists of a neutral arbitration organ in addition to the new dispute settlement procedure which is based on the existing procedure successfully formulated by prefectural medical associations. Under this system, the arbitration organ and the economic insurance plan function together organically, much like the two wheels of a cart. As long as the two wheels continue to turn properly, there is no fear for the system to become too idealistic and thus to lose its relevance; rather, it will remain a highly distinctive means for resolving disputes. The success of the system, nevertheless, depends on how it is put in practice. In this respect, we fervently hope that JMA members and prefectural medical associations will give us their full cooperation.

II. Characteristic Features of JMA Medical Professional Liability Insurance

JMA Medical Professional Liability Insurance (hereinafter to be referred to as JMA Insurance) was conceived according to the philosophy set forth in Section I. Among its major features are the following.

1. JMA Insurance is provided on a nationwide basis, by the JMA in an attempt to fulfill its responsibility as mainstay for medical care for the people.

The JMA itself is the policyholder, with an insurance contract concluded between the JMA and insurance companies. JMA members receive the benefits of this arrangement.

2. An independent and authoritative Deliberation Council has been created with its membership comprising medical and legal authorities but excluding parties representing the interests of either the insurer or the JMA. All disputes arising within the context of this system are referred to the Deliberation Council.

3. The insured amount covers large indemnification payments.

The compensation that is awarded to the injured when the physician is judged to be at fault should naturally be set within socially acceptable limits, but the maximum insurance payment has nevertheless been established high enough to enable, even in exceptional cases, the physician to bear the burden of a large indemnification payment.

4. A dispute settlement procedure is provided.

A dispute is like a living thing. In order for this system to function smoothly in the face of real conflicts, the procedure of settling disputes with the cooperation of the JMA, the prefectural medical associations, and the insurer has been instituted. For example, when through consultation it is deemed necessary to retain a legal counsel, a qualified advocate may be appointed at the insurer's expense to facilitate a prompt and just resolution of the dispute.

III. An Outline of the Insurance Contract

Policyholder: The Japan Medical Association
 The Tokio Marine & Fire Insurance Co., Ltd.
 (Managing Insurer)
 The Yasuda Fire & Marine Insurance Co., Ltd.
 Taisho Marine & Fire Insurance Co., Ltd.
 The Nippon Fire & Marine Insurance Co., Ltd.
 (Note: The Sumitomo Marine and Fire Insurance
 Co., Ltd. joined the plan newly as a joint insurer
 on July 1, 1975. Hereafter, the words "4 com-
 panies" shall mean "5 companies".)

Insurers:	Coinsurance by the above four (4) companies; the Managing Insurer undertakes to act on behalf of all the companies in policy issuing and claim settlement.
Insured:	Class "A" Member of the JMA
Scope of Liability:	Indemnification claim for bodily injuries resulting from a medical act, exceeding one million (1,000,000) yen.
Coverage & Limit of the Insurance money for Indemnification Payments:	Insurance payment shall be indemnification payments and legal expenses. The aggregate limit of the insurance money for indemnification payments (maximum insurance money) shall be one hundred million (100,000,000) yen for each insured physician.
Deductible Amount:	The deductible amount (amount borne by the insured) shall be one million (1,000,000) yen per each accident.
Term of Insurance:	One year to be Renewable each year.
Premiums:	To be paid by the JMA.
Claims Handling:	Claims shall be settled by the JMA and the Insurer in cooperation with the prefectural medical association concerned according to judgments by the Deliberation Council (see Section IV).
Applicable Clauses:	Articles of General Liability Insurance (Document 1—"General Articles") Special Clause for JMA Member Physicians (Document 2—"Special Clause") Agreement Concerning the Administration of JMA Medical Professional Liability Insurance (Document 3—"Administrative Agreement") Regulations Concerning Dispute Settlement Procedure under JMA Medical Professional Liability Insurance (Document 4—"Dispute Settlement Regulations")

COMMENTS

1. Class "A" JMA Member—the Insured

Under this insurance policy the insured—the parties protected by insurance—are all Class "A" Members of the JMA (Section 9 of Administrative Agreement). The Class "A" Member need not be the party directly involved in the medical accident in question since the policy also applies if the accident is attributable to a resident physician or a paramedical employee such as a nurse and yet action is brought against a

Class "A" Member as the founder, director, or supervisor of the medical facility in question (Article 1 of Special Clause).

(Notes)

(1) To qualify as an insured, the Class "A" Member must make regular payment of his JMA membership dues by the prescribed procedure; he need not take any separate steps or pay any additional fees to subscribe for insurance.

(2) A Class "A" Member shall qualify as an insured covered by the policy from that time when his JMA membership is approved; his status as an insured shall be forfeited when his JMA membership is terminated.

(3) The insurance shall not apply to Class "B" and "C" Members or to members paying reduced dues or are exempt from dues.

Class "B" and "C" Members may become eligible as insured by gaining the status of Class "A" Member upon payment of the required dues (by the procedure supervised by prefectural medical associations); a member accorded reduced dues or exempt from dues may become an insured by waiving this special status.

(4) If the founder of a medical facility is not a Class "A" Member (as in the case of a state or local public body, an educational corporation, etc.), this insurance naturally does not cover claims for compensation brought solely against the founder.

(5) In the event of the death a Class "A" Member, his successor shall succeed to eligibility as the insured only for those medical accidents involving the deceased and only for the remainder of the business year covered by insurance.

(6) The policy shall continue to be effective following forfeiture of eligibility on the member's death, withdrawal from membership, or any other form of disqualification, on condition that a set procedure has been followed during the insured term (see item 3 below).

2. Accidents Covered by the Insurance

This insurance applies to bodily injury claims resulting from medical acts (Article 1 of Special clause). The term "medical acts" under this insurance policy means all acts such as diagnosis and treatment carried out by using the methods which modern medical science approves. If there is any question as to whether the act concerned is medical or not, this will be determined by the Deliberation Council (Section 10 of Administrative Agreement).

(Notes)

(1) The scope of medical act

Medical acts under this insurance policy do not include operations carried out solely for cosmetic purposes or medical acts performed by a bogus doctor. It includes bodily injuries a patient sustains due to improper handling of medical equipment and by hospital diet. Since this insurance is limited to the medical acts, however, it does not cover accidents such

as hospital fires, vehicle accidents that occur during patient transfer, or other accidents attributable simply to the facilities, elevators, vehicles, etc. (Section 11 of Administrative Agreement). Such accidents should be covered by premises-operation liability insurance, automobile insurance and other specific types of liability insurance. Accordingly, for protection against accidents attributable to defective premises and/or faulty management it is advisable to take out such a premises-operation liability insurance policy, in addition to this insurance, especially in accident-prone hospitals.

(2) Exclusions from insurance coverage

Items excluded from this insurance plan are liability due to a willful act of the insured, liability against family members or relatives living in the same household, liability for bodily injuries sustained by the insured's employees during the performance of his duties, and additional liability assumed by the insured under a special agreement with a patient (Articles 5 and 6 of General Articles).

(3) Prophylactic vaccination

Claims arising from accidents due to prophylactic vaccination are, as a rule, made against the vaccinating agency but very few against physicians. However, this insurance plan is effective in exceptional cases, when a liability claim is made against an insured physician.

(4) Handling of criminal cases

This insurance applies to civil liability cases and does not extend to criminal cases. Accordingly in criminal cases, insurance money will not be paid for a fine, if imposed, much less for legal fees.

3. Effective Only for Claims Received during the Term Insured

The period covered by an insurance policy (term insured) is for one year from July 1, renewable each year. The plan provides indemnification for any claim or claims which may be received during the term insured (Article 1 of Special Clause). Hence, even a medical accident due to surgery undertaken several years earlier is covered by the insurance if a claim is received during the term insured.

One special exception applies to an insured who has forfeited his eligibility. Even if no claim is made during the term, the insured will be indemnified against any claim made up to five years after the expiration of the term insured on condition that a report has been made to the insurance company about the occurrence of the medical accident in question while the insurance is still effective (Article 2 Paragraph 2 of Special Clause).

(Notes)

(1) Provided that a claim for compensation is filed during the term insured, the insurance policy shall remain effective until the case is ultimately resolved regardless how long it may take. However, a claim of an injured party received during the term insured will not be honored if the physician has intentionally caused the insured party to delay the filing

of the claim until after the policy went into effect or if he has suddenly established his qualification as an insured under the insurance plan following an accident in anticipation of a claim to be filed.

(2) An insured who forfeits his eligibility for insurance protection can receive the special extended coverage only by notifying the insurance company of the items specified in Dispute Settlement Regulation 12 in the manner prescribed.

4. Effective Only for Claims Exceeding ¥1,000,000

The insurance plan applies only to a claim for one medical act in an amount exceeding one million yen (Section 12 Paragraph 1 of Administrative Agreement).

(Notes)

(1) The phrase "one medical act" used here refer to the definition given in the note to Item 6 below.

(2) For disputes involving a claim for ¥1,000,000 or less, the JMA stands ready to render consultation upon request through its Law Department.

5. Coverage and Limit of the Insurance Money

Payments made under the insurance policy comprise compensation payments to the injured party and legal expenses. The indemnification limit (maximum amount) to be paid in one year by the insurance company to the injured party as compensation is one hundred million yen for each insured. Legal expenses will be paid under a separate account. (Sections 4 and 6 of Administrative Agreement)

(Notes)

(1) Even if a number of accidents occur in one year, indemnification exceeding ¥100,000,000 will not be paid.

(2) Legal expenses are understood to comprise lawsuit costs, expenses for civil mediation or the like, and remunerations to attorneys.

6. Deductible Amount: ¥1,000,000

The deductible amount (payment to be borne by the insured) is one million yen per one medical act (Article 4 of Special Clause). Accordingly, when the compensation awarded exceeds ¥1,000,000, only the portion above that will be paid. For legal expenses, however, no deductible amount is specified.

(Notes)

(1) The phrase "one medical act" refers to one series of medical acts administered to one injured party. Even when more than one injured party is involved, if the cause is the same in all cases, they shall be treated collectively as one medical act.

7. Insurance Calculation Examples

Several typical examples of calculating insurance money follow.

* A compensation of ¥1,500,000 is awarded for a claim of ¥3,000,000 and legal expenses are ¥300,000. Payment is then made for ¥500,000 (the portion exceeding ¥1,000,000) as well as ¥300,000 to cover legal expenses.

* A compensation of ¥1,000,000 is awarded for a claim of ¥3,000,000 and legal expenses are ¥300,000. As the liability does not exceed one million yen, only ¥300,000 for legal expenses is paid.

* A claim of ¥1,010,000 is determined to be the amount due and legal expenses are ¥100,000. The payment: $¥10,000 + ¥100,000 = ¥110,000$.

* A compensation of ¥900,000 is awarded for a claim of ¥1,010,000 and legal expenses are ¥100,000. Since compensation does not exceed one million yen, only the legal expenses (¥100,000) are paid.

* A claim is made for ¥1,000,000 and the legal expenses is ¥200,000. The original claim does not exceed one million yen, and therefore the insurance plan does not apply and even legal expenses are not paid for.

* An example of maximum compensation: The amount claimed is ¥110,000,000 and the same amount is awarded, with ¥10,000,000 as legal expenses. The insurance covers ¥100,000,000 for compensation as well as ¥10,000,000 to meet the legal expenses.

8. In Combination with Other Insurance Plans

If an insured is also protected by another medical professional liability insurance policy, both policies shall provide coverage in accordance with their respective provisions, but indemnity cannot be collected under both policies for the duplicating portion of insurance coverage (Article 20 of General Articles).

IV. Dispute Settlement Procedure

1. Report Any Claim Received to the Prefectural Medical Association

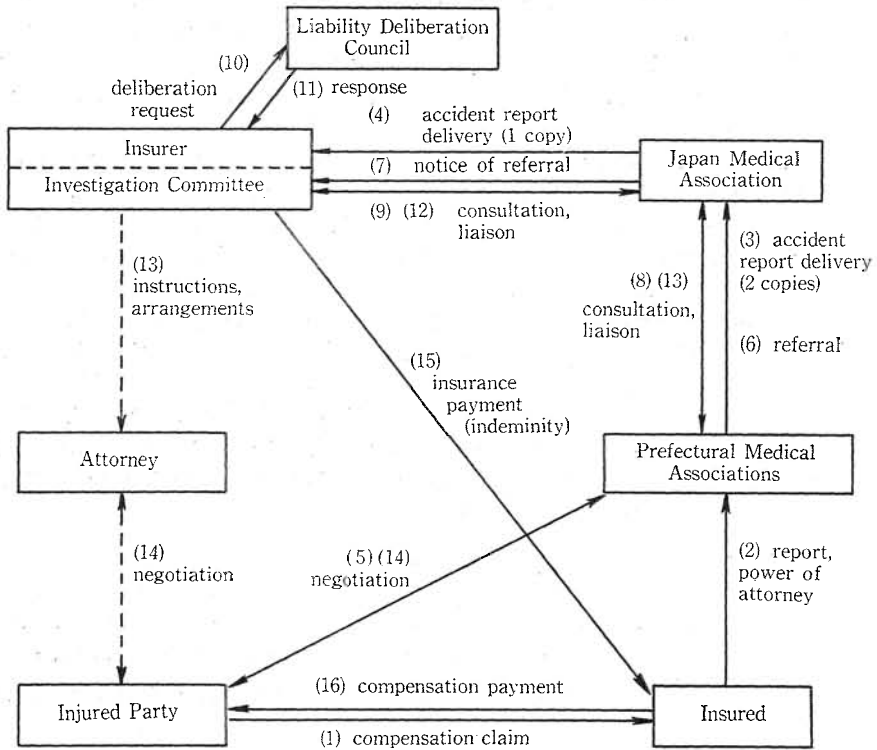
Whenever a member (an insured) receives a claim for compensation (whether by written document or oral notification), he should notify his prefectural association of it in accordance with the dispute settlement procedure set up by the prefectural association as before. The JMA prescribes no special report form to be used for this purpose ((1), (2) in the flow chart). But the reference of a dispute to the prefectural association should be accompanied by a power of attorney which also allows settlement under the JMA insurance plan.

2. Subsequent Settlement Steps

- (1) Prefectural medical association to forward accident report duplicates to the JMA

For any dispute case accepted by the prefectural association where the claim for compensation exceeds ¥1,000,000 (or is expected to exceed that sum), two copies of an accident report must be promptly forwarded to the JMA (3).

Fig. XII-1 Dispute Settlement Flow Chart



Tab. XII-1 Members of Liability Deliberation Council

Professor of Internal Medicine	2	Professor of Legal Medicine	2
Professor of Surgery	1	Professor of Civil Law	2
Professor of Obstetrics and Gynecology	1	Attorney	2

(2) Reference of a dispute to the JMA

The dispute must be assembled and referred to the JMA with necessary documents if the prefectural association determines to resolve the dispute by this dispute settlement procedure (6). The member is requested to cooperate in the preparation of such documents as the dispute report.

When a dispute has been referred to the JMA, it is obligated to notify the managing insurance company, set up liaison channels with the prefectural association when necessary and request the dispatch of officials for consultations (7), (8). The prefectural association, even after reference,

must keep in contact with the claimant and undertake any necessary negotiations until the case is resolved (5), (14). If a lawsuit is brought against a member in regard to any pending dispute which has been referred to the JMA for settlement, he shall without fail notify his prefectural association by providing a copy of the written complaint.

(3) From Investigation Committee to Deliberation Council

The managing insurance company is to maintain close liaison with the JMA through the Investigation Committee; after an investigation has been made, the insurance company must request the Deliberation Council for a judgment (9), (10). If an attorney's services are necessary or other steps need be taken, the insurance company shall make arrangements after consultation with the JMA (and the prefectural association).

(4) Judgment by Deliberation Council and Settlement

The Deliberation Council is to deliberate impartially behind closed doors on liability and an amount of indemnification (Document 5: Bylaws of Liability Deliberation Council). After the Council has delivered its opinion, the insurance company is to undertake dispute settlement through the Investigation Committee, cooperating with the JMA (11), (12), (13), (14), (13)', (14)'.

3. Final Settlement

(1) The party directly engaged in negotiations, for example, the prefectural association, is to draw up a final settlement with due deference to the position of the member, and any settlement draft is to be submitted to him first for his concurrence.

(2) Next, the prefectural association is to notify the insurance company, through the JMA, of the conditions of the settlement and the items of the legal expenses.

(3) After the Investigation Committee has decided upon an amount of insurance payment, the Insurance Company shall forward an insurance claim form to the member. On receipt of a filled form, it must then make a payment of the stated amount directly to the member (15). (If the general release form has not been completed at the time of the insurance payment, a copy of it is to be forwarded to the insurance company as soon as it is finished.) The items covered by insurance payment are noted in Section III 5.

The foregoing procedures are to be followed *mutatis mutandis* even in the cases of non-amicable settlements such as court decisions.

DOCUMENTS

1. Articles of General Liability Insurance

Article 1. (Scope of Liability)

The Company shall be liable to indemnify the Insured for bodily injury (including death resulting therefrom) to any third person and for loss of or damage or staining (hereinafter called "loss or damage") to property so long as such liability is imposed upon the Insured by law.

Article 2. (Scope and Limit of Indemnity)

1. The amount of loss or damage to be indemnified by the Company shall be limited to the amount paid by the Insured to the injured party in fulfillment of his legal obligations (less the value of any property to which the Insured is subrogated following payment of the compensation) and those expenses stipulated in Article 12.
2. The liability of the Company shall not exceed the limit stated in the policy except for expenses incurred in accordance with paragraphs 2 and 3 of Article 12.
3. The Company shall only be liable to pay the amount arrived at by deducting from the amount of loss or damage the deductible stated in the policy per each and every accident, except for expenses incurred in accordance with paragraphs 2 and 3 of Article 12.

Article 3. (Commencement and Termination of Liability)

1. The liability of the Company shall commence at 4:00 p.m. of the first day stated in the policy and shall cease at 4:00 p.m. of the last day of the policy period.
2. The Company shall not be liable to pay any claim occurring after attachment of the policy but prior to receipt of the premium stated in the policy.

Article 4. (Obligation of the Insured)

The Company shall be liable to pay any claim if the proposer, at the time of the conclusion of the contract, fails deliberately or through his gross negligence to declare any facts known to him bearing on information relative to the insurance as set out in the proposal from, or makes false statements. Nevertheless, the foregoing shall not apply to any loss or damage occurring after the Insured had asked for amendment of any such information and obtained the approval of the Company in writing.

Article 5. (Exclusions)

The Company shall not be liable to indemnify the Insured for any loss or damage caused, whether directly or indirectly, by:

- (1) Wilful act of the proposer or the Insured;
- (2) War (whether declared or not), riots, rebellions, strikes and

lock-outs;

- (3) Force Majeure such as earthquake, volcanic eruption, flood and tidal wave.

Article 6. (Exclusions)

The Company shall not be liable, unless otherwise specifically agreed, to indemnify the Insured for loss or damage for which the Insured becomes liable in the following circumstances:

- (1) aggravated liability assumed by the Insured under any contract or agreement with the third party;
- (2) liability to third persons who have a proper interest in property in the care, custody or control of the Insured.
- (3) liability to members of the Insured's family or relatives who live in the same household as the Insured;
- (4) liability arising from bodily injury to the Insured's employees whilst engaged in the Insured's business;
- (5) liability arising from drainage or exhausting.

Article 7. (Inspection)

1. The Insured shall undertake all necessary precautions to prevent the occurrence of an accident.
2. The Company may, at any time during the currency of this policy, investigate the precautionary measures taken by the Insured referred to in the preceding paragraph and request the Insured to improve any deficiencies.

Article 8. (Advice of Alterations)

1. The proposer or the Insured shall notify the Company in writing of any alterations to items described in the policy whenever he wishes to make alterations thereof or has knowledge of alteration having been made.
2. The Company shall not be liable to indemnify the Insured for loss or damage occurring between the time the alterations took place (or became known to the proposer or the Insured had such alteration been made without his prior knowledge) and the time of receipt by the Company of the notice referred to in the preceding paragraph.

Article 9. (Concurrent Insurance)

1. Should the proposer or the Insured wish to conclude any other insurance contracts (irrespective of the title or type of such contracts) which overlap this insurance in coverage or should he become aware of the existence of such concurrent insurances, the proposer or the Insured shall notify the Company in writing forthwith.
2. The Company shall not be liable to indemnify the Insured for loss or damage occurring between the time such concurrent insurance was concluded (or became known to the proposer or the Insured had such concurrent insurance been concluded without his prior

knowledge) and the time of receipt by the Company of the notice referred to in the preceding paragraph.

Article 10. (Occurrence of Accident)

1. If the proposer or the Insured has knowledge of a claim or a fortuitous accident which is likely to result in a claim hereunder (hereinafter called "accident"), the proposer or the Insured shall proceed as follows:
 - (1) inform the Company in writing without delay of the date, time and place of the accident, the name and address of the injured party or parties, the circumstances of the accident, the names and addresses of any witnesses and details of the claims brought against the Insured.
 - (2) take all necessary measures to preserve or exercise any rights of recourse against third persons and take all possible steps to avoid a claim or to minimize the loss or damage.
 - (3) not admit liability, whether totally or partially, without the prior approval of the Company. However, this provision shall not be construed to mean that the Insured should not give first-aid relief, call for medical assistance or make any other immediate arrangements to succour the injured party.
 - (4) promptly notify the Company of any suit or action brought against the Insured or against other persons by the Insured.
2. If without any proper reason the proposer or the Insured fails to act in the way set out in the preceding paragraph, the Company shall not be liable hereunder if the breach relates to Items 1 and 4 or for that part of the loss or damage which would have been prevented or reduced had there been no breach of Item 2, or for the amount for which the Company considers the Insured is not liable if the breach relates to Item 3.

Article 11. (Claims Settlement)

1. The Company shall at its own expense, undertake directly the settlement of all claims made by the injured party if the Company deems it necessary to do so. The Insured shall co-operate with the Company in all matters upon request of the Company.
2. The Company shall not be liable to pay any claim if the Insured refuses to co-operate as stated in the preceding paragraph without any proper reason.

Article 12. (Expenses to be borne by the Company)

1. The Company shall be liable for the following expenses paid by the proposer or the Insured.
 - (1) all necessary and effective expenses incurred in connection with Item 1, paragraph 1 of Article 10.
 - (2) if the Insured is not liable for a claim after having taken measures recognized as necessary and effective in preventing

- or minimizing the loss following a fortuitous accident which was likely to have resulted in a claim, the expenses incurred for first aid relief call for medical assistance and all other immediate arrangements to succour the injured party, and other expenses which had the prior approval of the Company in writing.
2. The Company shall indemnify the Insured for legal expenses incurred with the consent of the Company in connection with any lawsuit. However, if the total amount of claim, exclusive of the legal expenses provided for in this paragraph, exceeds the limit set out in the policy, the Company shall be liable for that proportion of the legal expenses which the limit bears to the total amount the claim.
 3. The Company shall be liable for expenses incurred by the Insured in accordance with paragraph 1 of the preceding Article.

Article 13. (Adjustment of Premium)

1. If the premium is calculated in relation to remuneration, visitors, receipts, sales or the like, the Proposer shall submit to the Company all necessary data for the adjustment of the premium immediately after expiry of this policy.
2. The Company shall have the right to examine and audit the books and records of the Insured or the Proposer which are considered to be necessary for the calculation of the premium at any time, within one year from the expiry of this policy.
3. If the premium calculated on the basis of the abovementioned data (or the minimum premium if the premium so calculated does not reach the agreed minimum premium) exceeds or falls short of the deposit premium received by the Company in advance, an additional or return of premium shall become due to or by the Company.
4. For the purposes of this policy.
 - (1) The word "remuneration" shall mean the total amount of the money paid by the Insured during the policy period to his employees engaged in the operations specified in this policy, irrespective of the actual name of such payment, in consideration of the labour rendered.
 - (2) The word "visitors" shall mean the total number of persons who are admitted to the facilities specified in this policy, whether admission is free or charged for, excluding, however, relatives of the Insured who live with the Insured in the same household and employees who are engaged in the Insured's operations.
 - (3) The word "receipts" shall mean the total amount of the money received (before payment of tax) by the Insured during the policy period for his operations as specified in this policy.
 - (4) The word "sales" shall mean the total amount of the considera-

tion (before payment of tax) which the Insured receives for all the goods or commodities sold by him during the policy period.

Article 14. (Annulment)

This policy shall be null and void if any of the following circumstances exists at the time of the conclusion of the contract:

- (1) If there is any fraud on the part of the Proposer, the Insured or their agents concerning this insurance.
- (2) If the Proposer fails to state in the proposal form the existence of any other insurance contracts of which he is aware which overlap this contract in coverage.
- (3) If the Proposer, in effecting this insurance on behalf of a third party, fails to make a statement to that effect in the proposal form.

Article 15. (Cancellation)

1. The Company shall have the right to cancel this insurance in the following cases:
 - (1) If the Insured refuses, without any proper reason, to comply with a request made by the Company in accordance with paragraph 2 of Article 7.
 - (2) If the Company considers that any alterations of which notice is given in accordance with paragraph 1 of Article 8 entail a substantial increase of the risk.
 - (3) When notice is given in accordance with paragraph 1 of Article 9.
2. The cancellation provided for in the preceding paragraphs shall not have retroactive effect.
3. The Company's right of cancellation for the reasons stipulated in Items 2 and 3 of paragraph 1 shall be nullified if it is not exercised by the Company within thirty days from the time of making such request or such notice.

Article 16. (Additional Premium)

1. If the Company considers that there is an increase in the risks to be borne by the Company when notice is given provided in paragraph 1 of Article 8, the Company may require the payment of additional premium.
2. If the Company requires the payment of additional premium in accordance with the provision of the preceding paragraph, the Company shall not be liable for any loss or damage sustained prior to receipt by the Company of such additional premium.

Article 17. (Return of Premium)

1. If this insurance becomes void, loses its effect or is cancelled for reasons for which the Company is responsible, the Company shall

return to the Proposer the whole premium in case the insurance is void, and such part of the premium as pertains to the unexpired period calculated on a daily pro rata basis, in case of loss of effect or cancellation.

2. If this insurance becomes void, loses its effect or is cancelled for reasons not imputable to the Company, the Company shall be entitled to the minimum premium as required by the Company if the insurance is void, and may allow a return of premium after retaining such part of the premium as pertains to the expired period calculated in accordance with the Company's Short Term Scale (or the minimum premium as prescribed by the Company if such earned premium does not reach the minimum premium) in case of loss of effect or cancellation.
3. In case of loss of effect or cancellation of insurance for which the premium is calculated in relation to the remuneration, visitors, receipts, sales or the like, adjustment of the premium shall be made in accordance with the provisions of paragraph 3 of Article 13, notwithstanding the preceding two paragraphs of this Article. However, in case this insurance loses its effect or is cancelled for reasons for which the Company is responsible, the adjustment shall be made as if there were no provision for a minimum premium.

Article 18. (Claims)

1. The Insured, for the purpose of obtaining indemnity for loss or damage covered under this policy, shall submit to the Company a statement of claim with documentary evidence of the loss, together with the policy, within thirty days from the day on which the amount of loss or damage has been ascertained or any period of grace granted by the Company in writing.
2. The Insured shall submit to the Company any documents which the Company considers necessary to investigate the claim in addition to the documentary evidence by the preceding paragraph.
3. The Company shall not be liable to indemnify the Insured for loss or damage if the Insured wilfully makes any false statement in the documents required by the preceding two paragraphs, conceals any fact when preparing the same or does not fulfil the duties imposed upon him by the preceding two paragraphs.

Article 19. (Payment of Claims)

The Company shall pay the claim within thirty days from the day on which the Company received the claim statement referred to in the preceding Article provided, however, necessary investigation within that period, the payment may be postponed.

Article 20. (Apportionment of Claim)

If any other insurance or insurances exists concurrently with this insurance and the aggregate amount of the claims payable under

each policy calculated separately without regard to any other insurance or insurances exceeds the actual amount of the claim, the Company shall only be liable for that proportion of the actual amount of the claim as the amount of claim payable under this policy bears to the aggregate amount.

Article 21. (Arbitration)

1. If any dispute should arise between the Company and the Insured as to the amount of claim payable by the Company, such dispute shall be referred to the judgment of two appraisers, one to be appointed by each party in writing. Should the two appraisers fail to agree, then the dispute shall be referred to the decision of any umpire to be appointed by these two appraisers.
2. Each party shall bear the cost (including remuneration) of the appraiser appointed by him and one-half of all other costs (including remuneration of the umpire).

Article 22. (Subrogation)

1. If the Company indemnifies any loss or damage for which the Insured has a right of recourse against any other person, the Company shall be subrogated to such rights of recourse to the extent of the claim paid by the Company.
2. The Insured shall promptly produce to the Company all the documents necessary to exercise the right referred to in the preceding paragraph following payment of the claim.

Article 23. (Proper Law)

All matters not provided for in these General Conditions shall be subject to the laws and ordinances of Japan.

2. Special Clauses for JMA Member Physicians

Article 1. (Company Liability for Indemnification)

The Insurance Company shall be liable for indemnifying the insured for loss by reason of the compensation the stipulations under Article 1 of Articles of General Liability Insurance (hereinafter "General Articles") notwithstanding, if the Insured has compensated for a bodily injury (including death resulting therefrom) of any third party which has arisen from medical act (irrespective of whether administered by the Insured or not), provided that the claim for compensation from the third party for such an injury is brought forward during the term insured.

Article 2. (Notification)

1. The Insured shall be obligated to notify the Company without delay of the details of any claim for compensation whenever such claim is received for an amount exceeding one million (1,000,000 yen).

2. If within the term insured the Insured becomes cognizant of the occurrence of any cause or reason liable to lead to a claim for compensation as stated in the preceding Paragraph and forthwith notifies the Company of the details, on condition that the claim for compensation due to the said cause or reason is made within five years of expiration of the term insured, such a claim shall be understood to have been brought during the term of the insurance policy.
3. If any one of two or more Insured who have participated in the performance of medical acts for one Injured Party makes the notification of Paragraph 2 or 3, it shall be understood that all Insured have made notification.

Article 3. (Consent of the Insured for Compensation Settlement)

1. Whenever the Company undertakes to conclude an agreement with an Injured Party about the presence or absence of liability to indemnify and/or the amount of compensation, the consent of the Insured shall be secured in advance irrespective of the stipulation of Article 11 Paragraph 1 of the General Articles.
2. If the Insured will not grant consent as stipulated in the preceding Paragraph without justifiable cause, the amount of indemnity to be paid by the Company shall be determined as no greater than the sum of the amounts derived for the following items.
 - (1) As for the payment of a compensation by the Insured to the Injured Party, the amount shall be that which is recognized as the established sum had the Insured granted consent under the preceding Paragraph.
 - (2) As for the expenses to be paid under Article 12 of the General Articles, the amount shall be that which had been incurred up to the time that the Company sought consent under the preceding Paragraph.

Article 4. (Deductible Amount)

1. The Company shall be liable to pay indemnification for one medical act only for the portion exceeding one million (1,000,000) yen provided that the extent of injury exceeds said sum, irrespective of any stipulation under Article 2 Paragraph 3 of the General Articles, and excepting those expenses provided for under Article 12 Paragraphs 2 and 3 of the General Articles.
2. The phrase "one medical act" in the preceding Paragraph shall be understood to mean one series of medical acts administered to the same Injured Party.
3. The preceding Paragraph notwithstanding, "one medical act" shall be considered to apply when two or more Injured Parties are injured due to the same cause.

Article 5. (Application of the General Articles and the Special Clauses)
The provisions of the General Articles and the Special Clauses shall

apply to each and every Insured.

Article 6. (Relationship to the General Articles)

Items not stipulated herein shall be handled in accordance with the provisions of the General Articles on condition that the said provisions are not in violation of the Special Articles.

3. Agreement Concerning the Administration of the JMA Medical Professional Liability Insurance

We, the JMA and the Tokio Marine and Fire Insurance Company, the Yasuda Fire and Marine Insurance Company, the Taisho Marine and Fire Insurance Company, and the Nippon Fire and Marine Insurance Company (hereinafter the "Company"), do enter into agreement as hereinbelow provided concerning the JMA Medical Professional Liability Insurance Contract concluded between the JMA and the Company.

Section 1. (Purpose)

This insurance is provided in order to achieve just and reasonable judgment for any dispute involving medical accidents, which concerns a Member or Members of the JMA, to indemnify the said Member or Members for a financial loss they may incur, and, by this means, to contribute to the sound development of medical care for the people.

Section 2. (Insurance Contract and the Insurer's Liability)

The JMA shall take out medical professional insurance policies showing Class "A" Members as the Insured; the Company shall be liable to make indemnification for the Insured in accordance with the provisions of Articles of General Liability Insurance (hereinafter "General Articles"), Special Clauses for JMA Member Physicians (hereinafter "Special Clauses"), and this Administrative Agreement.

Section 3. (Coinsurance)

1. The proportions of this insurance contract to be underwritten by each insurance company shall be as stated below. Each company shall bear liability separately for the respective portion allotted thereto under this insurance contract.

The Tokio Marine & Fire Insurance Co.	50.0%
The Yasuda Fire & Marine Insurance Co.	35.0%
The Taisho Marine & Fire Insurance Co.	7.5%
The Nippon Fire & Marine Insurance Co.	7.5%

2. The JMA and the Company hereby appoint the Tokio Marine & Fire Insurance Co. as Managing Insurer; the Managing Insurer shall represent the Company and conduct all business affairs pertaining to this insurance contract.

Section 4. (Limit of Insurance Money)

The total limit of insurance money to be paid to any one Insured during the term insured shall, in accordance with Article 2 Paragraph 2 of the General Articles, be the amount entered on the insurance policy (one hundred million [100,000,000] yen).

Section 5. (Application of Deductible Amount)

With respect to application of the deductible amount (one million [1,000,000] yen) stipulated in Article 4 of the Special Clauses, any objection raised over the applicability of one medical act shall be referred to the judgment of the Liability Deliberation Council.

Section 6. (Liability for Legal Expenses)

1. The Company shall be liable for any and all legal expenses necessary for dispute settlement by the procedure stipulated in Article 12.
2. Legal expenses in the preceding Paragraph are considered to comprise lawsuit costs, expenses for civil mediation, etc., and remuneration to attorneys.

Section 7. (Term Insured)

The term insured shall be one year as entered on the insurance policy.

Section 8. (Premium Payment)

The JMA shall undertake the payment of premiums as provided separately.

Section 9. (Qualification of the Insured)

1. The Insured under this insurance shall be any Class "A" Member affiliated with the JMA (excepting those accorded reduced dues or exempt from dues; the same shall apply hereinafter) whose dues are paid regularly by the specified procedures.
2. A person who gains the standing of Class "A" Member during the insurance term and meets the conditions in the preceding Paragraph shall be immediately qualified as an Insured.
3. A person who forfeits his standing as Class "A" Member during the insurance term shall, with the exception stated in the following paragraph, at the same time be disqualified as an Insured.
4. In the event of the demise of an Insured during the insurance term, his successor shall become eligible as the Insured for the insurance policy of that business year. In this case the insurance shall apply only to claims for compensation involving the deceased Insured.

Section 10. (Scope of the Medical Act, Part 1)

1. The phrase "medical act" as used in Article 1 of the Special Clauses is understood to mean activities such as diagnosis and treatment which are approved by modern medical science but do not include acts that are undertaken solely for cosmetic purposes.
2. Should there be any question concerning the scope of the phrase

“medical act” in the preceding Paragraph, the judgment shall be referred to the Liability Deliberation Council.

Section 11. (Scope of the Medical Act, Part 2)

Bodily injury which arises out of possession, use, or care of facilities, lifts, automobiles, trains, airplanes, or boats shall not be covered by this insurance plan.

Section 12. (Dispute Settlement Procedures)

1. The Company shall be responsible for only those disputes referred to the JMA by a Prefectural Medical Association wherein the claim for compensation for one medical act exceeds one million (1,000,000) yen.
2. The Company shall establish the Liability Deliberation Council to seek its counsel for the purpose of just dispute settlement concerning such matters as the presence or absence of liability and an indemnification amount, and undertake settlement in accordance with the said Council's response. The Liability Deliberation Council shall be operated as provided separately.
3. The Company shall establish an Investigation Committee to make Investigations required for review by the Liability Deliberation Council as well as to carry out other activities required for dispute settlement. The Investigation Committee shall be operated as provided separately.
4. Particulars of the dispute settlement procedures shall be as provided in Regulations Concerning Dispute Settlement Procedures under the JMA Medical Professional Liability Insurance plan (hereinafter “Dispute Settlement Regulations”).

Section 13. (Interpretation and Application of Insurance Clauses)

1. It shall be sufficient if the notifications by the Insured to the Insurer stated in Article 10 Paragraph 1 Items 1 and 4 of General Articles as well as Article 2, each Paragraph, of the Special Clauses are carried out in accordance with the stipulations under 1 (1), 10 (1), and 12 of the Dispute Settlement Regulations.
2. The double insurance provisions stipulated in Article 9, Article 14 Item 2, and Article 15 Paragraph 1 Item 3 of General Articles shall not apply to this insurance contract.

Section 14. (Revision of Provisions)

Any provision of this Administrative Agreement may be revised by mutual agreement of the JMA and the Company.

Section 15. (Term of Validity)

The term of validity of this Administrative Agreement shall be one year from July 1st, 1973. However, in the absence of special notice by the JMA or the Company prior to one month before the expiration date, the term of validity shall be extended for one year

and the same shall apply thereafter.

As a proof of conclusion of the foregoing Administrative Agreement, five copies shall be prepared and signed and sealed by all parties concerned, and each party shall retain one copy.

July 1st, 1973

Taro, Takemi, President

Japan Medical Association

2-5, Kanda Surugadai, Chiyoda-ku, Tokyo

Minoru Kikuchi, President

The Tokio Marine and Fire Insurance Company

3-1-1, Marunouchi, Chiyoda-ku, Tokyo

Takeo Miyoshi, President

The Yasuda Fire and Marine Insurance Company

1-5-4, Otemachi, Chiyoda-ku, Tokyo

Akio Hirata, President

The Taisho Marine and Fire Insurance Company

1-5, Kyobashi, Chuo'ku, Tokyo

Yasutaro Ukon, President

The Nippon Fire and Marine Insurance Company

2-4-4, Nihonbashi-dori, Chuo-ku, Tokyo

(Note): The Sumitomo Marine and Fire Insurance Company Newly joined the plan as a joint Insurer on July 1st, 1975

4. Regulations Concerning Dispute Settlement procedure under JMA Medical Professional Liability Insurance

Regulations concerning dispute settlement procedure under JMA Medical Professional Liability Insurance (hereinafter "JMA Liability Insurance") are as provided herein.

1. (Notification of an Accident)

- (1) When a Prefectural Medical Association receives notification from a Member of a claim for compensation arising from a medical accident (hereinafter "accident") and the claimed amount for said accident exceeds or may be presumed to exceed one million (1,000,000) yen for one medical act, two copies of an accident report are to be forwarded forthwith to the JMA. (The JMA shall forward one copy to the Insurer.)
- (2) No specific accident report form shall be required. (A conventional form is acceptable.)

2. (Power of Attorney)

When a Prefectural Medical Association is authorized by a Member to settle a dispute, it shall require delivery of a power of attorney

wherein application of JMA Liability Insurance dispute settlement procedure is also authorized.

3. (Accident Investigation and Decision on Settlement Policy by Prefectural Medical Association)

The Prefectural Medical Association shall be empowered to decide, on the basis of the results of an accident investigation, whether to apply the JMA Liability Insurance dispute settlement procedures. (Even when a claim for compensation for one medical act exceeds one million (1,000,000) yen, application is not required if the Prefectural Medical Association judges that there is no need to resort to JMA Liability Insurance.)

4. (Referral to the JMA)

- (1) When application of JMA Liability Insurance dispute settlement procedures has been authorized by a Prefectural Medical Association, the dispute shall be referred to the JMA with the following documents:

- 1) Dispute settlement referral form and a copy of the power of attorney from the Member stipulated in the preceding Article 2.
- 2) Dispute report.
- 3) Other reference materials. (Submission of a copy of the bill of complaint is obligatory if a lawsuit has been instituted.)

- (2) Referral may be made orally, by telephone, or using any other convenient method if need for urgency exists, provided that the documents stipulated in the preceding paragraph are subsequently submitted without delay.

- (3) Even after the referral, the Prefectural Medical Association shall continue to negotiate with the Claimant as necessary until the final settlement.

5. (Liaison with the Insurer and Activities of the Investigation Committee)

- (1) When settlement of a dispute has been referred to the JMA, it shall promptly assemble reference documents and notify the Insurer. (When necessary, the JMA shall establish liaison with the Prefectural Medical Association and request the dispatch of official personnel. Expenses required for dispatching official personnel shall be borne by the JMA.)

- (2) The Insurer, upon notification, shall through its Investigation Committee investigate the particulars of the accident and arrange for necessary action, while at the same time maintaining close cooperation with JMA.

6. (Designation of Attorneys)

Designation of an attorney when necessary for dispute settlement shall be made after joint consultations among the JMA, Prefectural Medical Association, and Insurer.

7. (Request for Review by the Deliberation Council)
The Insurer shall, on completion of the work of the Investigation Committee stipulated in the preceding Article 5, request the Liability Deliberation Council for review.
8. (Deliberation Council Response and Consequent Negotiation)
 - (1) The Insurer, upon response by the Liability Deliberation Council, shall through its Investigation Committee take all required action, including determination of negotiation policy, in accordance with the substance of the response.
 - (2) The Insurer shall inform the JMA of the substance of (1), and the JMA shall notify the Prefectural Medical Association of the same and request its cooperation.
9. (Final Resolution by an Out-of-court Settlement)
 - (1) When the Prefectural Medical Association, requested to cooperate and acting as a party to the negotiations, has arranged an out-of-court settlement which the Insured approves and which is in accordance with the response of the Liability Deliberation Council, it shall notify the JMA, in writing, of the terms of the settlement and of the details of legal and other expenses.
 - (2) After the Insurer has been notified by the JMA of the terms of an out-of-court settlement and, through its Investigation Committee, has decided upon the amount of insurance money, it shall pay that amount to the Member upon receipt of an insurance claim form from the said Member.
 - (3) Upon payment of insurance money, the Insurer shall notify the JMA to that effect, and the JMA shall notify the Prefectural Medical Association of the same.
(In the case of settlement by court judgment and the like other than the above-mentioned out-of-court settlement the above procedure shall be applied.)
10. (Institution of a Lawsuit during Referral)
 - (1) If a lawsuit is brought against the Member involving a dispute that has been referred to the JMA, the Prefectural Medical Association shall notify the JMA to that effect and attach a copy of the bill of complaint.
 - (2) The Insurer, when he has been informed by the JMA of the lawsuit, shall through its Investigation Committee consider a counterplan.
11. (Cooperation)
 - (1) The JMA and the Prefectural Medical Association, in the interest of dispute settlement, shall at all times maintain close cooperation and resolve differences of opinion.
 - (2) The JMA, the Prefectural Medical Association, and the Insurer shall strive to resolve disputes promptly on the basis of these Dispute Settlement Regulations and work in concert until a final settlement

is concluded.

12. (Notification by an Insured Who forfeits Eligibility)
The notification of Article 2 Paragraph 2 of the Special Clauses for JMA Physicians shall be by written document giving the Member's name, name and address of the Injured Party, date or dates of the medical act performed, and type of accident. The Prefectural Medical Association receiving notice shall forward two copies to the JMA (of which the JMA shall forward one copy to the Insurer).
13. (Liaison Office)
All communication from a Prefectural Medical Association to the JMA is to be directed to JMA the Medical Professional Liability Insurance Section, Law Department, Japan Medical Association.

5. Bylaws of the Liability Deliberation Council

Administration of the Liability Deliberation Council (hereinafter "Deliberation Council") provided for in Article 12, Paragraph 2 of the Agreement Concerning Administration of JMA Medical Professional Liability Insurance shall be as stipulated herein.

Article 1. (Purpose)

The Deliberation Council, in order to achieve a just and reasonable settlement of any claim for compensation arising from a medical accident, shall undertake deliberations from a medical and legal viewpoint free of bias.

Article 2. (Composition)

The Deliberation Council shall comprise the following members.

1. Doctors of learning and experience 6 persons
2. Jurists of learning and experience 4 persons

Article 3. (Chairman and Vice-Chairman)

1. A Chairman and a Vice-Chairman shall be elected by a vote of all members.
2. The Deliberation Council shall be presided over by the Chairman with the assistance of the Vice-Chairman.

Article 4. (Members)

1. The term of office of all members shall be two years.
2. Members shall not be precluded from reappointment.
3. Vacancies in the Deliberation Council may be filled, and the term of office of the replacing member shall be the unexpired term of the retiring member.
4. When necessary, one or more temporary members may be appointed.
5. Any person representing the interests of the JMA or the Insurer is not eligible for membership.

Article 5. (Matters for Review)

The Deliberation Council shall deliberate the following matters for any case brought before it by the Insurer, and the Insurer shall be informed of the results in writing.

- (1) Presence or absence of liability to indemnify.
- (2) Amount of indemnification.
- (3) Other measures necessary to achieve just settlement.

Article 6. (Administration)

The following stipulations shall govern the administration of the Deliberation Council.

- (1) Decisions shall be reached by majority rule.
- (2) Deliberations shall be conducted *in camera*.
- (3) Members shall not reveal to any third person or persons confidential information they may acquire without justifiable cause.
- (4) No member shall join in the deliberation of a case in which he has a personal interest.

Article 7. (Expenses)

Expenses needed for the administration of the Deliberation Council shall be determined separately as stipulated in the Deliberation Council Expense Regulations.

Article 8. (Business Affairs)

The administration of the Deliberation Council shall be handled by the Insurer.

XIII. CHINESE MEDICINE IN JAPAN*

1. Abolition of System for Physicians of Chinese Medicine

In Japan the Government enacted a new licensing system for practitioners in 1883, putting an end to the system for physicians of Chinese medicine that had continued from the ancient time.

As a result, the medical practitioner's license was changed to be granted only to those who had passed the examination in Western medicine. Consequently, even those who wanted to practice Chinese medicine (that is, Chinese medicament therapy as distinguished from acupuncture and moxibustion throughout this article) had to learn Western medicine first in order to qualify themselves as practitioners.

In this respect, Japan differs from other Asian countries where a dual system is in force of granting licenses both to physicians of Western medicine and those of Chinese medicine.

In enacting the new medical practitioners law, the Government made an exception of acupuncture and moxibustion which may be called the physiotherapy of Chinese medicine. That is, acupuncturists and moxa-cauterists were allowed to practice only on reporting, but without obtaining the practitioners license. Later, the regulations were so revised as to grant the license to those who passed the designated examination. At present, those who have completed the course of an acupuncture-moxibustion school and have passed the designated examination are qualified as acupuncturist-moxa-cauterist. More recently, physicians who are interested in Chinese medicine are increasing in number, and its modernization is in progress.

2. Trend towards Revival of Chinese Medicine

There were not many physicians who would study Chinese medicine after having learned Western medicine. And during the Taisho era (1912—1926), the physicians to maintain the traditions of Chinese medicine fell to about a dozen in number across this country. In those days when the Chinese medicine was in the extreme of decline, "The Iron Hammer on Medical World" by Keijuro Wada, "New Studies in Chinese Medicine" by Tadanao Nakayama, etc. were published in succession, the authors stressed that Chinese medicine was the highest medical system in its clinical availability to cure sick individuals by internal medicine.

* by Yoshinori Otsuka, director of Oriental Medicine Research Institute attached to Kitasato Institute for Infectious Diseases.

These books played an important role in arousing renewed interest in Chinese medicine, which became increasingly evident as the Showa era (1926—) opened. In 1927, Kyushin Yumoto, a disciple of Keijuro Wada, published "Sino-Japanese Medicine" in three volumes. A monumental work representative of the early part of the Showa era, this book played a lead-role in the revival of this medicine. Then, Totaro Shimizu, in cooperation with Yoshinori Otsuka and others—all disciples of Kyushin Yumoto—set up in 1934 the Japan Society of Chinese Medicine, and launched a monthly "Chinese Medicine and Medicaments." Published from Shunyodo Shoten, this journal continued to have a tremendous influence on the studies of Chinese medicine in Japan until it went out of existence in 1944.

During the time, Domei Yakazu, Yudo Yakazu, Yoshinori Otsuka and others jointly founded Kaiko Gakuen in 1936 for the purpose of fostering their successors. In that year, they held a seminar on Chinese medicine, which was made an official lecture of Takushoku University from the following year till 1944, sending out into the world several hundreds of students.

3. Modernization of Chinese Medicine

Now the studies of Chinese medicine were passed on to the hands of younger and more progressive physicians, efforts to modernize such studies were begun. Under the joint authorship of Chokyu Kimura, Domei Yakazu, Yoshinori Otsuka and Totaro Shimizu, "Examination and Treatment of Chinese Medicine" was published by Manzando Shoten. This work was a new attempt in that it explained to physicians and pharmacists who had little knowledge on Chinese medicine how this art heals various diseases giving them by the Western terminology, and met with very favorable reception.

In 1950, the Japan Society for Oriental Medicine was organized for the purpose of modernizing Chinese medicine and thus of contributing to the progress of the modern medical care. This Society has at present a membership of about 1,500, which showed and is still showing a very rapid growth year after year. At its 26th general assembly held in Hakata, Kyushu district, this year, 1 paper by the President, 2 special papers and 70 general papers were read, and lively discussions took place among those present. This Society holds an annual general assembly and meetings of its local chapters, and publishes a quarterly organ "Journal of the Japan Society for Oriental Medicine."

4. Research Institutes

- a) Oriental Medicine Research Institute attached to Kitasato Institute for Infectious Diseases

This institute has it for its objective to create a new Japanese medicine based on both Oriental and Occidental systems of medicine. Its building was completed in April 1974 at No. 9-1, 5-chome, Minato-ku, Tokyo (7 storied, 1 underground floor, total floor area 3,919.66 m²). The officers are: Director Yoshinori Otsuka, Manager of Examination and Medicament Treatment Dept. Takahide Kuwaki, Manager of Acupuncture-Moxibustion Treatment Dept. Sodo Okabe, Manager of Acupuncture-Moxibustion Research Dept. Yoshio Manaka. Currently, there are 20 odd researchers and more than 10 collaborators who are engaged in examination and treatment or research work under the guidance of the officers. Since July of this year, Yushiro Kimura has joined in for the studies of Chinese and Japanese medicaments. Opened only about a year ago, this institute is still in the preparatory stage, and much is expected of its future activities.

b) Japan Chinese Medicine Research Institute

This was started in 1972 as a foundation as authorized by the Ministry of Health and Welfare, and is located at No. 4-10, 3-chome Nihonbashi, Chuo-ku, Tokyo c/o Chujoto Bldg. Headed by Chujiro Kimura, the institute purposes to foster clinical physicians of Chinese medicine, and is making vigorous efforts to that end, holding training courses and offering correspondence courses.

c) Sino-Japanese Medicaments Research Institute, Toyama University

Initially called the Sino-Japanese Medicaments Research Facilities, this institute under the directorship of Hikokichi Oura is conducting basic studies of Chinese and Japanese medicines. In early autumn each year, a symposium is held to report on their research results. It is expected that a clinical department is opened in due course. Located within Toyama University at No. 31, Gofuku, Toyama City.

Other than the above, there are the Society to Combine Eastern and Western systems of Medicine with Takahide Kuwaki as the leader, and the Chinese Medicine Interchange Society connecting various research bodies in the Kansai, Chugoku, Shikoku and Kyushu districts. While, on the other hand, interested medical and pharmaceutical students at many universities and colleges are making studies at their respective places in a form of club activities.

d) Physiotherapeutic Department, Tokyo University of Education

This department was formerly called the National Blind School, where leaders (that is, teachers at local blind schools) in acupuncture, "anma" massage and massage were used to be trained. At present, this department is a branch school of Tokyo University of Education, and they are tackling the problem of introducing physiotherapy of Chinese medicine into the clinical science under the direction of Prof. Katsusuke Serizawa.

At the general assembly of the Japan Society for Oriental Medicine for this year, lectures were delivered on scientific studies of such tradi-

tional methods of diagnosis as inspection and palpation as well as analysis of anamnesis under the theme of clinical science of the Oriental therapy.

e) Japan Acupuncturists and Moxa-cauterists Society

This society has its office at No. 1-33, 1-chome Negishi, Taito-ku, Tokyo, and is managed by President Seito Kinoshita and Chief Director Yoshio Kawakatsu, having a membership of about 4,000. Recently, this society celebrated its 25th anniversary. The Japan Acupuncture and Moxibustion Therapeutic Society is a research organ under this society, with a membership of about 1,500, and holds an annual general assembly and publishes its organ three times a year. The office is at No. 507, Utagawa, Shibuya-ku, Tokyo, c/o Debata.

5. What We Expect from Future Studies in Chinese Medicine

Looking back on the history of Chinese medicine in Japan in various aspects, we find that studies deviating from the traditions soon disappear like so many bubbles.

Traditions are not merely to preserve old things as they were, but they must change with the times without losing their very essence.

Seen from this standpoint, studying classics in Chinese medicine is very important. In reading such important books as "Su wên", "Lin shu" and "Shang han lun", the etymological investigation often proves highly useful in bringing to light the true meanings of what were not very clear before.

This etymological approach is relatively new, dating back only to the Meiji era, and this is what we have to put much more emphasis in our future studies. In this connection, "New Interpretations of Huang ti nei ching su wên" by Yasuzo Shibasaki as compiled by Tokyo Higher Acupuncture and Moxibustion School is a most enlightening work.

Recently, the problem of exhaustion of natural resources for traditional drugs not in distant future is coming to the fore. Here in Japan, however, we have apart from the Chinese medicaments an additional of medicinal plants descended to us traditionally from old times. Although these medicinal plants have little been involved in the subjects for medical studies, we at Kitasato Institute and Oriental Medicine Research Institute are thinking of taking up these long forgotten traditional folk medicines, thereby to pave a way contributory to the progress of our future medical care.

In our studies of Chinese medicine, we will have to pay more and more attention to the researches in such fields that are not directly related with medicine or pharmacy, and this will make it necessary for us to secure the cooperation of collaborators from many other fields.

The Ministry of Health and Welfare has recently decided to set up special study groups and to entrust them with the basic and clinical re-

searches in the acupuncture and moxibustion and the medicaments of the Chinese medicine. While these groups are expected to be started shortly, results of their studies are looked forward to with great expectations.

6. Periodicals on Chinese Medicine

"Clinics of Chinese Medicine"

Monthly, general. No. 411-15, Nishibori, Niiza City, Saitama Prefecture

"Oriental Medicine"

Monthly, general. Shizensha, c/o Fuji Bldg., No. 6-5, 4-chome Iidabashi, Chiyoda-ku, Tokyo

"Katsu"

Monthly, medicaments and dietetics, the organ of Japan Chinese Medicine Research Institute. c/o Chujoto Bldg., No. 4-10, 3-chome Nihonbashi, Chuo-ku, Tokyo

"Oriental Medicine"

Monthly, general, the organ of Oriental Medicine International Research Foundation

"Sino-Japanese Medicaments"

Monthly, Chinese medicine. Uchida Wakanyaku at No. 13, 4-chome Nihonbashi-Honcho, Chuo-ku, Tokyo

"Studies in Chinese Medicine"

Monthly, Chinese medicine. Kotaro Kanpo at No. 6, 1-chome Nakatsu-Hamadori, Oyodo-ku, Osaka City

"Journal of Japan Society of Oriental Medicine"

Quarterly, general, the organ of the Japan Society of Oriental Medicine. Office of Japan Society of Oriental Medicine c/o Koei Bldg., No. 29-8, 1-chome Shinjuku, Shinjuku-ku, Tokyo

7. Books on Chinese Medicine

Books that are available at present follow:

"Reference Book on Examination and Treatment of Chinese Medicine"

By Otsuka, Yakazu and Shimizu, Nanzando Shoten

"Treatment of Chinese Medicine by Symptoms"

By Yoshinori Otsuka, Nanzando Shoten

"Formulary of Chinese Medicine"

By Domei Yakazu, Sogensha

"Practical Application of Chinese Formulary"

By Koin Yamada, Nanzando Shoten

"Encyclopedia of Chinese and Folk Medicines"

By Yoshinori Otsuka, Shufunotomo Sha

"One Hundred Stories on Chinese Medicine Therapy"

"One Hundred Stories on Chinese Medicine Therapy, 2nd Series"

“One Hundred Stories on Chinese Medicine Therapy, 3rd Series”

By Domei Yakazu, Idononippon Sha

“30 Years of Examination and Treatment”

By Yoshinori Otsuka, Sogen Sha

“Chinese Medicine”

By Yoshinori Otsuka, Sogen Sha

“Treatment of Acupuncture and Moxibustion”

By Buntoku Shirota, Sogen Sha

“Clinical Records of Acupuncture and Moxibustion Treatment”

By Buntoku Shirota, Sogen Sha

“Reference Book on Clinics of Acupuncture and Moxibustion”

By Yoshio Manaka, Idononippon Sha

XIV. APPENDIX

(1) Medical Care and Related Statistics

Tab. XIV-1 Population and Vital Statistics

Year	Population	Births	Deaths	Natural Increase	Infant Deaths (under 1 yr.)	Neonatal Deaths (under 28 days)	Still-births	Marriages	Divorces
1920	55,963,053	2,025,564	1,422,096	603,648	335,613	139,681	144,038	546,207	55,511
1925	59,736,822	2,066,091	1,210,706	875,385	297,008	121,238	124,403	521,438	51,687
1930	64,450,005	2,085,101	1,170,867	914,234	258,703	104,101	117,730	506,674	51,259
1935	69,254,148	2,190,704	1,161,936	1,028,768	233,706	97,994	115,593	556,730	48,528
1940	71,933,000	2,115,867	1,186,595	929,272	190,509	81,869	102,034	666,575	48,556
1947	78,101,473	2,678,792	1,138,238	1,540,554	205,360	83,047	123,837	934,170	79,551
1950	83,199,637	2,337,507	904,876	1,432,631	140,515	64,142	216,974	715,081	83,689
1955	89,275,529	1,730,692	693,523	1,037,169	68,801	38,646	183,265	714,861	75,267
1960	93,418,501	1,606,041	706,599	899,442	49,293	27,362	179,281	866,115	69,410
1965	98,274,961	1,823,697	700,438	1,123,259	33,742	21,260	161,617	954,852	77,195
1966	99,056,000	1,360,974	670,342	690,632	26,217	16,296	148,248	940,120	79,432
1967	99,637,000	1,935,647	675,006	1,260,641	28,928	19,248	149,389	953,096	83,478
1968	100,794,000	1,871,839	686,555	1,185,284	28,600	18,326	143,259	956,312	87,327
1969	102,022,000	1,889,504	693,636	1,195,868	26,879	17,142	138,219	984,150	91,258
1970	103,070,000	1,934,239	712,962	1,221,277	25,412	16,742	135,095	1,029,405	95,937
1971	104,345,000	2,000,981	684,532	1,316,449	24,800	16,460	130,920	1,091,229	103,595
1972	106,700,000	2,038,678	683,760	1,354,918	23,777	15,821	125,155	1,099,974	108,382
1973	108,080,000	2,091,976	709,421	1,382,555	23,687	15,479	116,156	1,071,916	111,877

Rates									
Year	Birth (%)	Death (%)	Natural Increase (%)	Infant Death (per 1,000 Live Births)	Neonatal Death (per 1,000 Live Births)	Still-birth (per 1,000 Live Births)	Marriage (%)	Divorce (%)	
1920	36.2	25.4	10.8	165.7	69.0	66.4	9.8	0.99	
1925	34.9	20.3	14.7	142.4	58.1	56.3	8.7	0.87	
1930	32.4	18.2	14.2	124.1	49.9	53.4	7.9	0.80	
1935	31.6	16.8	14.9	106.7	44.7	50.1	8.0	0.70	
1940	29.4	16.5	12.9	90.0	38.7	46.0	9.3	0.68	
1947	34.3	14.6	19.7	76.7	31.0	44.2	12.0	1.02	
1950	28.1	10.9	17.2	60.1	27.4	84.9	8.6	1.01	
1955	19.4	7.8	11.6	39.8	22.3	95.8	8.0	0.84	
1960	17.2	7.6	9.6	30.7	17.0	100.4	9.3	0.74	
1965	18.6	7.1	11.4	18.5	11.7	81.4	9.7	0.79	
1966	13.7	6.8	7.0	19.3	12.0	98.3	9.5	0.80	
1967	19.3	6.7	12.6	15.0	9.9	71.6	9.5	0.83	
1968	18.6	6.8	11.8	15.3	9.8	71.1	9.5	0.87	
1969	18.5	6.8	11.7	14.2	9.1	68.1	9.6	0.89	
1970	18.8	6.9	11.9	13.1	8.7	65.3	10.0	0.93	
1971	19.2	6.6	12.6	12.4	8.2	61.4	10.5	0.99	
1972	19.4	6.5	12.9	11.8	7.8	57.8	10.4	1.03	
1973	19.4	6.6	12.8	11.3	7.4	52.6	9.9	1.04	

Source: "Vital Statistics", Health and Welfare Statistics Dept., Minister's Secretariat, Ministry of Health and Welfare
 "Census Report", and "Population Estimates as of October 1 of Each Year", Bureau of Statistics, Office of the Prime Minister

Tab. XIV-2 Number of Persons Covered by Health Insurances

(In 1,000 persons)

Item	F.Y.1964	F.Y.1965	F.Y.1966	F.Y.1967	F.Y.1968	F.Y.1969	F.Y.1970	F.Y.1971	F.Y.1972	F.Y.1973
Total	96,508	96,990	98,185	99,030	100,878	102,485	103,943	105,017	107,482	109,427
Employees' health insurance	52,903	53,847	55,386	56,370	58,240	60,064	60,580	61,296	63,121	65,302
The insured	23,620	24,254	25,172	26,042	26,941	27,891	28,444	28,405	29,115	29,793
Dependents	29,283	29,593	30,214	30,328	31,299	32,173	32,136	32,891	34,006	35,509
Health insurance administered by government	23,344	23,732	24,604	24,622	25,408	25,956	26,020	25,998	26,729	27,411
The insured	11,426	11,702	12,203	12,525	12,854	13,148	13,183	13,095	13,314	13,490
Dependents	11,918	12,030	12,401	12,097	12,554	12,808	12,837	12,903	13,415	13,921
Health insurance administered by associations	16,155	16,454	16,976	17,745	18,720	19,929	21,236	22,253	23,260	24,640
The insured	7,088	7,326	7,592	8,026	8,513	9,088	9,697	10,024	10,412	10,857
Dependents	9,057	9,128	9,384	9,719	10,207	10,841	11,539	12,229	12,848	13,783
Day laborers' health insurance	2,084	2,105	2,204	2,319	2,389	2,422	1,191	1,079	901	845
The insured	948	957	1,018	1,054	1,086	1,101	637	578	563	528
Dependents	1,136	1,148	1,186	1,265	1,303	1,321	554	501	338	317
Seamen's insurance	718	725	737	744	742	728	741	732	734	737
The insured	250	248	256	256	258	258	262	261	260	257
Dependents	468	477	481	488	484	470	479	471	474	480
National government employees	2,898	2,942	2,951	2,960	2,965	2,957	2,960	2,980	3,009	3,004
Membership	1,092	1,114	1,125	1,136	1,142	1,143	1,149	1,155	1,161	1,158
Dependents	1,806	1,828	1,826	1,824	1,823	1,814	1,811	1,825	1,848	1,846
Local government employees	5,154	5,308	5,333	5,401	5,441	5,509	5,882	5,695	5,917	6,090
Membership	1,936	2,001	2,049	2,098	2,126	2,179	2,536	2,307	2,409	2,496
Dependents	3,218	3,307	3,284	3,303	3,315	3,330	3,346	3,388	3,508	3,594
Public corporation employees	2,326	2,326	2,302	2,279	2,258	2,232	2,203	2,192	2,182	2,166
Membership	744	765	774	781	787	791	789	785	786	785
Dependents	1,582	1,561	1,528	1,498	1,471	1,441	1,414	1,407	1,396	1,381
Private school teachers and other personnel	224	255	279	300	317	331	347	367	389	409
Membership	126	141	155	166	175	183	191	200	210	222
Dependents	98	114	124	134	142	148	156	167	179	187
National health insurance	43,505	43,143	42,799	42,660	42,638	42,421	43,363	43,721	44,361	44,125

* F.Y. = fiscal year

Tab. XIV-3 Number of Physicians and Nurses

	(in 1000 persons)										
	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973
Physicians(Total)	106,512	108,102	109,369	110,759	111,657	113,630	115,974	118,990	123,178	125,302	126,327
Engaged in Institution											
Employers in Hospital	2,339	2,613	2,608	2,887	3,179	3,098	3,252	3,597	3,503	3,562	3,391
Employers in Clinic	50,716	51,664	52,609	53,665	54,473	55,357	56,167	57,170	58,125	58,636	58,172
Employees in Hospital	27,030	27,460	28,038	28,157	28,264	29,098	30,863	32,461	33,932	35,051	35,791
Employees in Clinic	9,739	9,341	9,011	8,717	8,532	8,509	8,489	8,469	8,580	8,551	8,280
Employees in Medical School Hospital	9,647	9,943	9,749	10,530	10,542	10,966	10,824	11,517	12,606	13,284	14,473
Engaged in Non-Institution											
Employees in Medical School	2,000	2,006	2,165	1,966	2,108	2,129	2,329	2,086	2,286	2,290	2,467
Administrative	2,328	2,251	2,260	2,368	2,027	1,969	1,933	1,895	2,222	2,008	2,110
Engaged in Others	2,713	2,824	2,929	2,469	2,532	2,504	2,117	1,795	1,924	1,920	1,643
Dentists	34,517	35,079	35,558	36,022	36,524	36,943	37,406	37,859	39,218	40,293	40,490
Nurses(Total)	215,528	229,797	245,211	265,230	228,569	239,037	254,628	273,572	290,733	305,915	316,803
Engaged in Nurses' School	1,036	1,117	1,167	1,341	1,645	1,703	1,876	2,086	2,568	2,870	3,226
Engaged in Health Center	314	294	312	312	346	337	341	357	362	400	446
Engaged in Hospital	167,384	177,829	189,021	203,808	180,649	190,364	201,951	213,880	224,991	235,876	246,145
Engaged in Clinic	37,615	41,259	45,477	50,015	40,525	42,003	46,142	52,919	58,227	62,136	62,003
Engaged in School	2,489	2,560	2,613	2,534	1,219	878	894	872	742	694	762
Dispatched Nurses	5,622	5,966	5,488	5,386	2,175	1,761	1,411	974	1,080	1,034	858
Others	1,068	1,172	1,128	1,234	1,992	1,991	2,013	2,484	2,763	2,905	3,363

Source: "Survey" of Physicians, Dentists and Pharmacists", Health and Welfare Statistics Dept., Minister's Secretariat, Ministry of Health and Welfare

Tab. XIV-4 Number of Hospitals, Clinics and Beds in Hospitals

	(End of year)										
	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973
Hospitals											
Total	6,621	6,838	7,047	7,308	7,505	7,703	7,819	7,974	8,026	8,143	8,188
Psychiatric	629	676	725	769	818	853	874	896	900	925	925
Tuberculosis	474	374	340	283	250	220	187	160	139	126	114
Leprosy	14	14	14	14	14	14	14	14	14	16	16
Infectious Disease	52	48	46	41	39	37	36	35	30	29	29
General	5,452	5,726	5,922	6,201	6,384	6,579	6,708	6,869	6,943	7,047	7,104
Clinics											
Total	62,353	63,296	64,524	65,679	66,869	67,962	68,305	68,997	69,857	70,734	71,927
Clinics with Beds	26,270	26,814	27,332	28,213	28,961	29,569	29,717	29,841	30,062	30,032	-
Clinics without Beds	36,083	36,482	37,192	37,466	37,908	38,393	38,588	39,156	39,795	40,702	-
Dental Clinics	27,869	28,158	28,602	28,893	29,153	29,489	29,649	29,911	30,317	30,504	31,163
Beds in Hospitals											
Total	794,434	833,606	873,652	918,233	963,113	1,003,638	1,033,550	1,062,553	1,082,647	1,105,403	1,125,606
Psychiatric	136,387	153,639	172,950	191,597	210,627	226,063	238,190	247,265	253,462	261,527	268,669
Tuberculosis	235,150	227,454	220,757	211,527	204,945	195,710	186,001	176,949	165,888	155,691	147,304
Leprosy	14,208	13,230	13,230	13,230	13,230	13,236	13,217	13,217	13,217	14,261	14,261
Infectious Disease	23,317	23,821	24,179	23,872	23,789	24,042	23,716	22,144	22,643	22,120	21,536
General	385,372	415,462	442,536	478,007	510,522	544,587	572,421	601,978	627,437	651,804	651,804
Beds per 10,000 persons											
Total	82.6	85.8	88.9	92.7	96.1	99.0	100.7	102.5	103.1	103.0	103.5
Psychiatric	14.2	15.8	17.6	19.3	21.0	22.3	23.2	23.8	24.1	24.4	24.7
Tuberculosis	24.5	23.4	22.5	21.4	20.4	19.3	18.1	17.1	15.8	14.5	13.6
Leprosy	1.5	1.4	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Infectious Disease	2.4	2.5	2.5	2.4	2.4	2.4	2.4	2.2	2.2	2.1	2.0
General	40.1	42.7	45.0	48.3	50.9	53.7	55.8	58.1	59.8	60.7	62.0

Source: "Survey of Medical Institutions, "Health and Welfare Statistics Dept., Minister's Secretariat, Ministry of Health and Welfare

Tab. XIV-5 Number of Hospitals by Bed Scale and Its Composition (in %)

		1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973
Total	Number	6,511	6,718	6,929	7,168	7,412	7,566	7,743	7,903	8,002	8,075	8,188
	%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
20-29 Beds	Number	1,398	1,373	1,338	1,354	1,305	1,261	1,244	1,230	1,200	1,171	1,119
	%	21.5	20.4	19.3	18.9	17.6	16.7	16.1	15.6	15.1	14.5	13.7
30-39 Beds	Number	717	751	782	804	805	802	811	792	799	808	821
	%	11.0	11.2	11.3	11.2	10.9	10.6	10.5	10.0	10.0	10.0	10.1
40-49 Beds	Number	502	551	551	556	615	646	677	724	751	776	784
	%	7.7	8.2	8.0	7.8	8.3	8.6	8.7	9.2	9.4	9.6	9.6
50-59 Beds	Number	1,476	1,469	1,491	1,546	1,651	1,715	1,758	1,807	1,843	1,881	1,915
	%	22.7	21.9	21.5	21.6	22.3	22.7	22.9	23.1	23.1	23.3	23.4
100-149 Beds	Number	803	859	953	997	1,017	1,024	1,048	1,072	1,068	1,061	1,074
	%	12.3	12.8	13.8	13.9	13.7	13.5	13.5	13.6	13.3	13.1	13.1
150-199 Beds	Number	465	488	512	544	565	601	601	608	626	627	645
	%	7.1	7.3	7.4	7.6	7.6	8.0	7.8	7.7	7.8	7.8	7.9
200-299 Beds	Number	576	611	643	665	705	731	770	808	809	807	853
	%	8.8	9.1	9.3	9.3	9.5	9.6	9.9	10.2	10.1	10.0	10.4
300-399 Beds	Number	261	276	311	327	352	371	395	407	436	466	476
	%	4.0	4.1	4.5	4.6	4.7	5.0	5.1	5.1	5.4	5.8	5.8
400-499 Beds	Number	102	120	126	143	162	171	185	191	204	199	205
	%	1.6	1.8	1.8	2.0	2.2	2.3	2.4	2.4	2.5	2.5	2.5
500-Over	Number	211	220	222	232	235	244	254	264	266	279	296
	%	3.2	3.3	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.5	3.6

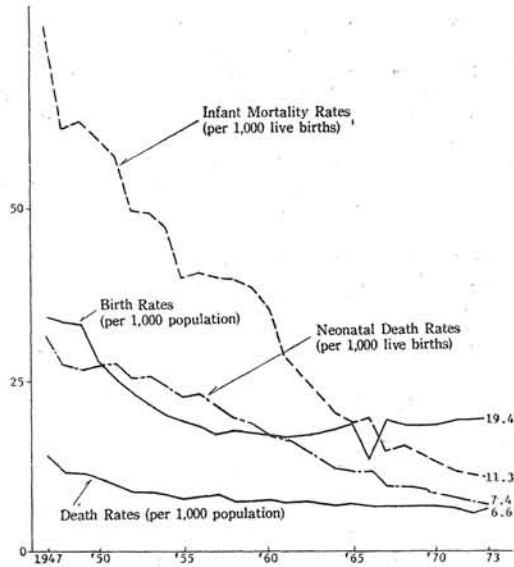
Source: "Hospital Report", Health and Welfare Statistics Dept.,
Minister's Secretariat, Ministry of Health and Welfare

Tab. XIV-6 Estimated Numbers and Consultation Rates of Patients Visited Hospitals and Clinics a Day

		'63.7.17	'64.7.15	'65.7.14	'66.7.13	'67.7.12	'68.7.17	'69.7.9	'70.7.8	'71.7.14	'72.7.12	'73.7.11
Estimated Number of Patients (in 1,000 persons)												
Total		5,484.7	5,513.3	5,808.1	6,349.9	6,384.3	6,739.2	7,018.2	7,247.3	6,386.5	6,610.6	7,809.6
In-patients		734.0	796.7	813.7	842.0	888.6	928.4	941.4	971.6	979.2	1,013.1	1,062.5
Out-patients		4,750.7	4,716.6	4,994.5	5,507.9	5,495.7	5,810.7	6,076.8	6,275.7	5,407.3	5,597.5	6,747.0
Patients in Hospitals		1,591.4	1,640.6	1,642.7	1,264.2	1,755.0	1,866.2	1,956.8	2,075.1	1,989.8	1,937.7	2,180.0
In-patients		658.7	714.4	710.9	746.8	777.3	818.0	825.5	852.6	862.7	888.2	922.4
Out-patients		932.7	926.2	931.0	1,017.4	977.8	1,048.2	1,131.3	1,222.5	1,127.2	1,049.5	1,257.6
Patients in Clinics		3,071.2	3,127.9	3,239.1	3,668.1	3,621.6	3,765.3	3,927.0	4,068.2	3,311.4	3,670.0	4,550.4
In-patients		75.3	82.3	102.8	95.2	111.2	110.4	115.9	118.9	116.5	124.9	140.1
Out-patients		2,995.9	3,045.6	3,136.8	3,572.9	3,510.4	3,654.9	3,811.1	3,949.3	3,194.9	3,545.1	4,410.3
Consultation Rates (per 100,000 population)												
Total		5,704	5,673	5,910	6,410	6,369	6,646	6,837	6,977	6,082	6,215	7,184
In-patients		763	819	828	850	886	916	917	935	932	953	977
Out-patients		4,941	4,854	5,082	5,560	5,482	5,730	5,920	6,042	5,150	5,263	6,206
Patients in Hospitals		1,655	1,688	1,672	1,781	1,751	1,840	1,906	1,998	1,895	1,822	2,005
In-patients		685	735	723	754	775	807	804	821	822	835	849
Out-patients		970	953	948	1,027	975	1,034	1,102	1,177	1,073	987	1,157
Patients in Clinics		3,194	3,218	3,296	3,703	3,613	3,713	3,826	3,917	3,154	3,450	4,186
In-patients		78	85	105	96	111	109	113	114	111	117	129
Out-patients		3,116	3,133	3,191	3,607	3,502	3,604	3,713	3,802	3,043	3,333	4,057

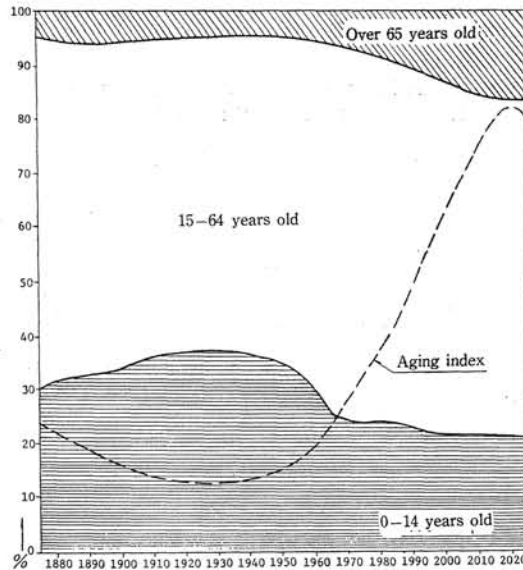
Source: "Patients Survey", Health and Welfare Statistics Dept.,
Minister's Secretariat, Ministry of Health and Welfare

Fig. XIV-1 Vital Statistics After World War II



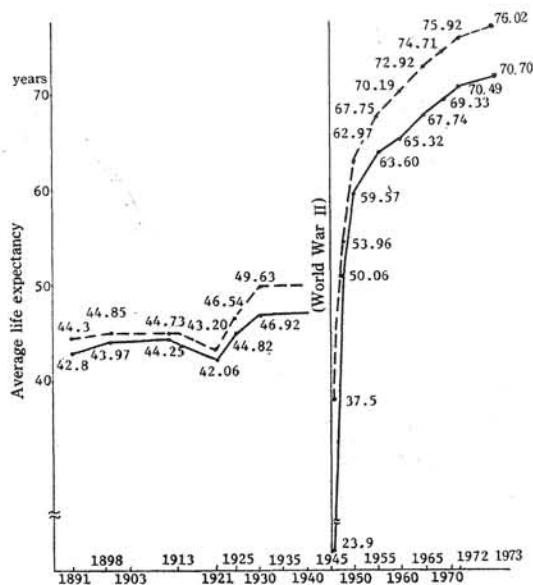
Source: "Vital Statistics", Health and Welfare Statistics Dept., Minister's Secretariat, Minister of Health and Welfare

Fig. XIV-2 Change in Population Structure by Age



$$\text{Aging index} = \frac{\text{Population of over 65 years}}{\text{Population of 0 to 14 years}}$$

Fig. XIV-3 Average Life Expectancy of Japanese people



Source: "Life Tables" Health and Welfare Dept.,
Minister's Secretariat, Ministry of Health
and Welfare

Tab. XIV-7 Consultation Rate by Sex and Age Group
(per 100,000 population a day)

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Total	4,805	5,054	5,260	5,704	5,673	5,910	6,410	6,369	6,646	6,837	6,977	6,082	6,215
Male	5,076	5,232	5,439	5,819	5,789	5,991	6,371	6,275	6,464	6,681	6,790	5,856	6,049
Female	4,550	4,883	5,086	5,593	5,561	5,831	6,448	6,459	6,821	6,988	7,158	6,300	6,375
Age 0	5,189	7,423	7,510	7,955	7,978	7,361	10,042	8,043	9,146	9,251	8,958	8,763	7,488
1-4	4,947	5,308	5,366	5,454	5,954	5,740	7,203	6,770	7,605	7,774	8,100	6,917	6,858
5-14	3,136	3,295	3,405	3,947	4,145	4,278	4,747	4,767	4,927	5,115	5,072	5,126	4,903
15-24	4,902	5,006	5,009	5,200	4,681	4,826	4,927	4,694	4,732	4,583	4,555	4,262	3,970
25-34	5,619	5,516	5,750	6,151	5,965	6,082	6,281	5,974	6,208	6,213	6,313	5,124	5,014
35-44	5,377	5,508	5,766	6,129	6,029	6,504	6,704	6,803	6,769	6,934	7,134	5,714	6,096
45-54	6,121	5,806	6,077	6,751	6,787	7,010	7,750	7,855	8,248	8,404	8,526	6,923	7,324
55-64	5,163	6,106	6,349	6,992	7,375	7,942	8,698	9,018	9,483	9,923	10,333	8,833	9,102
65-74	4,317	5,979	6,441	7,557	7,676	8,310	9,362	9,778	10,324	11,160	11,683	10,182	11,302
75-	4,168	4,634	5,287	6,206	5,896	6,572	7,096	7,929	8,631	9,359	9,928	9,366	12,044

Source: "Patients Survey", Health and Welfare Statistics Dept.,
Minister's Secretariat, Ministry of Health and Welfare

Fig. XIV-4 Consultation Rate* by Sex and Age

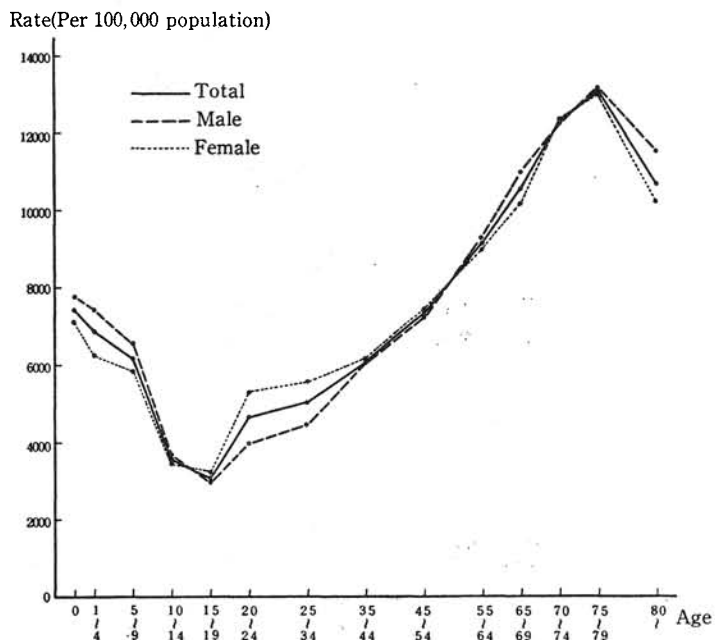


Fig. XIV-5 Consultation Rate* of Patients of Malignant Neoplasms

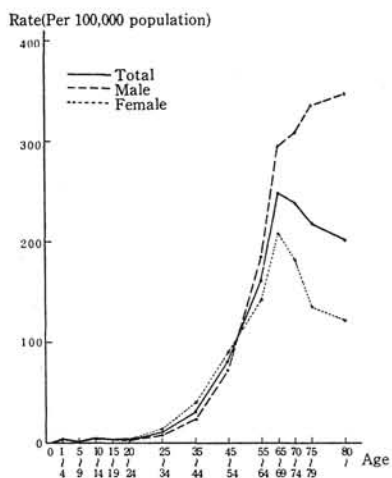
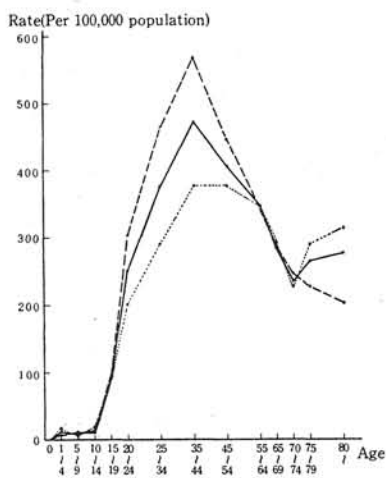


Fig. XIV-6 Consultation Rate* of Patients of Mental Disorder



(* No. of in-and-out patients visited hospitals and clinics per 100,000 population a day)

Fig. XIV-7
 Consultation Rate* of Patients
 of Circulatory System Disorder

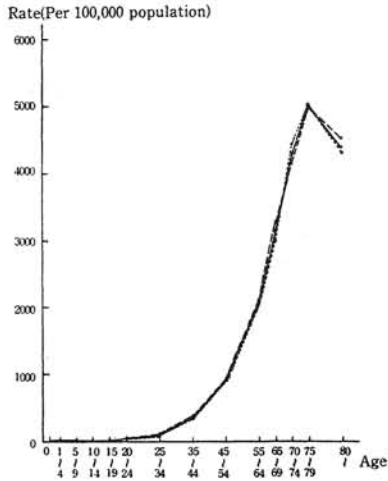


Fig. XIV-8
 Consultation Rate* of Patients
 of Teeth and their Supporting
 Tissues Disorder

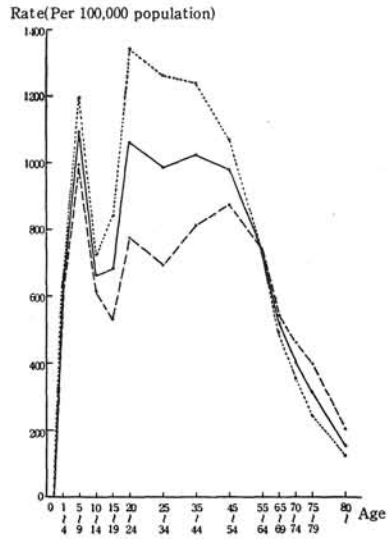
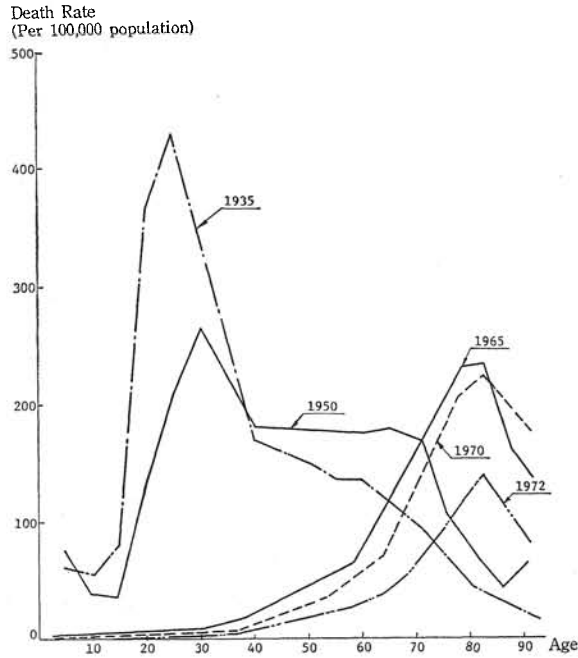


Fig. XIV-9 Change in Tuberculosis Death Rate by Age Group



Source: Health and Welfare Statistics Dept., Minister's Secretariat, Ministry of Health and Welfare

(2) Medical Schools

(As of August 1, 1975)

Number of Medical Schools

National medical schools	33	Medical schools in universities	44
Public medical schools	8	Medical colleges	26
Private medical schools	29		
Total	70	Total	70

Number of Graduates a Year

National medical schools	3,560
Public medical schools	600
Private medical schools	2,900
Total	7,060

Addresses of Medical Schools and Number of Graduates (Gr.)**National**

	Sendai, Miyagi Pref. 980 Tel.: (0222) 74-1111 Gr.: 120
Hokkaido University Faculty of Medicine Sapporo, Hokkaido 060 Tel.: (011) 711-2111 Gr.: 120	Akita University School of Medicine Akita, Akita Pref. 010 Tel.: (0188) 33-1166 Gr.: 80
Asahikawa Medical College Asahikawa, Hokkaido 071-01 Tel.: (0166) 61-1151 Gr.: 100	Faculty of Medicine, Yamagata University Yamagata, Yamagata Pref. 990 Tel.: (0236) 31-1421 Gr.: 100
Hirosaki University Faculty of Medicine Hirosaki, Aomori Pref. 036 Tel.: (01722) 2-3111 Gr.: 120	University of Tsukuba Faculty of Medicine Niharu-gun, Ibaragi Pref. 300-31 Tel.: (0298) 57-4511 Gr.: 100
Tohoku University School of Medicine	

Gunma University School of Medicine
 Maebashi, Gunma Pref. 371
 Tel.: (0272) 31-7221
 Gr.: 100

Faculty of Medicine, University of Chiba
 Chiba, Chiba Pref. 280
 Tel.: (0472) 22-7171
 Gr.: 120

Faculty of Medicine, University of Tokyo
 Bunkyo-ku, Tokyo 113
 Tel.: (03) 812-2111
 Gr.: 100

School of Medicine, Tokyo Medical and Dental University
 Bunkyo-ku, Tokyo 113
 Tel.: (03) 813-6111
 Gr.: 80

Niigata University School of Medicine
 Niigata, Niigata Pref. 951
 Tel.: (0252) 23-6161
 Gr.: 120

School of Medicine, Kanazawa University
 Kanazawa, Ishikawa Pref. 920
 Tel.: (0762) 62-8151
 Gr.: 120

Faculty of Medicine, Shinshu University
 Matsumoto, Nagano Pref. 390
 Tel.: (0263) 35-4600
 Gr.: 100

School of Medicine, Gifu University
 Gifu, Gifu Pref. 500
 Tel.: (0582) 65-1241
 Gr.: 80

Hamamatsu Medical College
 Hamamatsu, Shizuoka Pref. 431-31
 Tel.: (0534) 33-5621
 Gr.: 100

Nagoya University School of Medicine
 Showa-ku, Nagoya 466
 Tel.: (052) 741-2111
 Gr.: 100

Mie University School of Medicine
 Tsu, Mie Pref. 514
 Tel.: (0592) 32-1111
 Gr.: 100

Shiga University Faculty of Medicine
 Moriyama, Shiga Pref. 524
 Tel.: (07758) 3-2115
 Gr.: 100

Faculty of Medicine, Kyoto University
 Sakyo-ku, Kyoto 606
 Tel.: (075) 751-2111
 Gr.: 120

Osaka University Medical School
 Kita-ku, Osaka 530
 Tel.: (06) 443-5531
 Gr.: 100

Kobe University School of Medicine
 Ikuta-ku, Kobe 650
 Tel.: (078) 341-7451
 Gr.: 120

Tottori University School of Medicine
 Yonago, Tottori Pref. 683
 Tel.: (0859) 33-1111
 Gr.: 120

Okayama University Medical School
 Okayama, Okayama Pref. 700
 Tel.: (0862) 23-7151
 Gr.: 120

Hiroshima University School of Medicine
 Hiroshima, Hiroshima Pref. 734
 Tel.: (0822) 51-1111
 Gr.: 120

Yamaguchi University School of Medicine
 Ube, Yamaguchi Pref. 755
 Tel.: (0836) 31-3121
 Gr.: 100

School of Medicine, Tokushima University
 Tokushima, Tokushima Pref. 770
 Tel.: (0886) 31-3111
 Gr.: 120

Faculty of Medicine, Ehime University
Matsuyama, Ehime Pref. 790
Tel.: (0899) 41-1967
Gr.: 100

Faculty of Medicine, Kyushu University
Fukuoka, Fukuoka Pref. 812
Tel.: (092) 641-1151
Gr.: 120

Nagasaki University School of Medicine
Nagasaki, Nagasaki Pref. 852
Tel.: (0958) 47-1111
Gr.: 120

Kumamoto University Medical School
Kumamoto, Kumamoto Pref. 860
Tel.: (0963) 63-1111
Gr.: 120

Miyazaki Medical College
Miyazaki, Miyazaki Pref. 880
Tel.: (0985) 27-0214
Gr.: 100

School of Medicine, Kagoshima University
Kagoshima, Kagoshima Pref. 890
Tel.:
Gr.: 120

Total Gr.: 3,560

Public

Sapporo Medical College
Sapporo, Hokkaido 060
Tel.: (011) 611-2111
Gr.: 100

Fukushima Medical College
Fukushima, Fukushima Pref. 960
Tel.: (0245) 21-1211
Gr.: 80

Yokohama University School of Medicine
Minami-ku, Yokohama 232
Tel.: (045) 781-1311
Gr.: 60

Nagoya City University Medical School
Mizuho-ku, Nagoya 467
Tel.: (052) 851-5511
Gr.: 60

Kyoto Prefectural University of Medicine
Kamikyo-ku, Kyoto 602
Tel.: (075) 231-2311
Gr.: 100

Osaka City University Medical School
Abeno-ku, Osaka 545
Tel.: (06) 633-1221
Gr.: 80

Nara Medical University
Kashiwara, Nara Pref. 634
Tel.: (07442) 2-3051
Gr.: 60

Wakayama Medical College
Wakayama, Wakayama Pref. 640
Tel.: (0734) 31-2151
Gr.: 60

Total Gr.: 600

Private

Iwate Medical University School of Medicine
Morioka, Iwate Pref. 020
Tel.: (0196) 51-5111
Gr.: 80

Jichi Medical School of Medicine
Minamikawachi-machi, Tochigi
Pref. 329-04
Tel.: (02854) 4-2111
Gr.: 100

Dokkyo Medical College
Mibu-machi, Tochigi Pref. 321-02
Tel.: (02828) 6-1111
Gr.: 100

Saitama Medical School
Moroyama-machi, Saitama Pref. 350-04
Tel.: (04929) 4-1212
Gr.: 80

- Defense Medical College**
Tokorozawa, Saitama Pref. 359
Tel.: (0429) 64-7605
Gr.: 80
- Nihon University School of Medicine**
Itabashi-ku, Tokyo 173
Tel.: (03) 972-8111
Gr.: 120
- School of Medicine, Toho University**
Ota-ku, Tokyo 143
Tel.: (03) 762-4151
Gr.: 80
- Nippon Medical School**
Bunkyo-ku, Tokyo 113
Tel.: (03) 822-2131
Gr.: 100
- Tokyo Medical College**
Shinjuku-ku, Tokyo 160
Tel.: (03) 351-6141
Gr.: 120
- Tokyo Women's Medical College**
Shinjuku-ku, Tokyo 162
Tel.: (03) 353-8111
Gr.: 100
- The Jikei University School of Medicine**
Minato-ku, Tokyo 105
Tel.: (03) 433-1111
Gr.: 120
- School of Medicine, Keio University**
Shinjuku-ku, Tokyo 160
Tel.: (03) 353-1211
Gr.: 100
- School of Medicine, Showa University**
Shinagawa-ku, Tokyo 141
Tel.: (03) 784-1151
Gr.: 120
- Juntendo University School of Medicine**
Bunkyo-ku, Tokyo 113
Tel.: (03) 813-3111
Gr.: 80
- Kyorin University School of Medicine**
Mitaka, Tokyo 181
Tel.: (0422) 47-5511
Gr.: 100
- School of Medicine, Kitasato University**
Sagamihara, Kanagawa Pref. 228
Tel.: (0427) 78-8111
Gr.: 120
- Teikyo University School of Medicine**
Itabashi-ku, Tokyo 173
Tel.: (03) 964-1211
Gr.: 100
- St. Marianna University School of Medicine (formerly Toyo Medical College)**
Takatsu-ku, Kawasaki, Kanagawa Pref. 213
Tel.: (044) 977-8111
Gr.: 100
- Tokai University School of Medicine**
Isehara, Kanagawa Pref. 259-11
Tel.: (03)93-1121
Gr.: 80
- Kanazawa Medical College**
Uchinada-machi Ishikawa Pref. 920-02
Tel.: (07628) 6-2211
Gr.: 100
- Fujita Gakuen University School of Medicine**
Toyoake-cho, Aichi Pref. 470-11
Tel.: (0562) 93-2000
Gr.: 100
- Aichi Medical University**
Nagakute-machi, Aichi Pref. 480-11
Tel.: (05616) 2-3311
Gr.: 100
- Osaka Medical College**
Takatsuki, Osaka Pref. 569
Tel.: (0726) 83-1221
Gr.: 100
- Kansai Medical School**
Moriguchi, Osaka Pref. 570
Tel.: (06) 992-1001
Gr.: 100

Kinki University School of Medicine

Sayama, Osaka Pref. 589

Tel.: (0723) 66-0221

Gr.: 100

Hyogo College of Medicine

Nishinomiya, Hyogo Pref. 662

Tel.: (0798) 45-6111

Gr.: 100

Kawasaki Medical College

Kurashiki, Okayama Pref. 701-01

Tel.: (0864) 62-1111

Gr.: 100

**Fukuoka University School of
Medicine**

Fukuoka, Fukuoka Pref. 814

Tel.: (092) 801-0180

Gr.: 100

**Kurume University School of
Medicine**

Kurume, Fukuoka Pref. 830

Tel.: (09422) 5-3311

Gr.: 120

Total Gr.: 2,900

(3) Medical and Related Institutes

**Institute of Immunological Science,
Hokkaido University**

Kita-ku, Sapporo, Hokkaido 060
Tel.: (011) 711-1865

**Research Institute of Applied
Electricity, Hokkaido University**

Kita-ku, Sapporo, Hokkaido 060
Tel.: (011) 711-2111

**Balneotherapeutics Research Institute
and Branch of the Hokkaido Univer-
sity, School of Medicine**

Noboribetsu-Higashi-machi,
Noboribetsu, Hokkaido 059-05
Tel.: (01438) 4-2064

**Cancer Institute, Hokkaido University,
School of Medicine**

Kita-ku, Sapporo, Hokkaido 060
Tel.: (011) 711-2111

**Central Animal Laboratory, Hokkaido
University, School of Medicine**

Kita-ku, Sapporo, Hokkaido 060
Tel.: (011) 711-2111

**Cancer Institute of Sapporo Medical
College**

Chuo-ku, Sapporo, Hokkaido 060
Tel.: (011) 611-2111

**Marine Medical Institute, Sapporo
Medical College**

Higashi-Rishiri-cho, Hokkaido 097-04
Tel.: (01638) 2-1250

**Institute for Apoplexy, Hirosaki
University, School of Medicine**

Zaifu-cho, Hirosaki, Aomori Pref. 036
Tel.: (01722) 2-3111

**The Research Institute for Tuber-
culosis, Leprosy and Cancer,
Tohoku University**

Hirose-cho, Sendai, Miyagi Pref. 980

Tel.: (0222) 22-6181

**Institute of Balneology, Tohoku
University, School of Medicine**

Naruko-machi, Miyagi Pref. 989-68
Tel.: (022982) 3-2531

**Research Institute of Brain Diseases,
Tohoku University School of Medicine**

Naga-machi, Sendai, Miyagi Pref. 982
Tel.: (0222) 48-3584

**Institute for Experimental Animals,
Tohoku University School of Medicine**

Seiry-cho, Sendai, Miyagi Pref. 982
Tel.: (0222) 74-1111

**Central Laboratory, Fukushima
Medical College**

Sugitsuma-cho, Fukushima,
Fukushima Pref. 960
Tel.: (0245) 21-1211

**Central Isotope Laboratory,
Fukushima Medical College**

Sugitsuma-cho, Fukushima,
Fukushima Pref. 960
Tel.: (0245) 21-1211

**Rehabilitation Laboratory,
Fukushima Medical College**

Iisaha-machi, Fukushima, Fukushima
Pref. 960
Tel.: (02454) 2-5121

**Institute of Endocrinology, Gunma
University**

Showa-machi, Maebashi, Gunma
Pref. 371
Tel.: (0272) 31-7221

**Behavior Research Institute, School
of Medicine, Gunma University**

Showa-machi, Maebashi, Gunma
Pref. 371
Tel.: (0272) 31-7221

Institute of Neurology and Rehabilitation, School of Medicine, Gunma University

Showa-machi, Maebashi, Gunma
Pref. 371
Tel.: (0272) 31-7221

Laboratory of Animal Experiment, School of Medicine, Gunma University

Showa-machi, Maebashi, Gunma
Pref. 371
Tel.: (0272) 31-7221

Research Institute for Chemobio-dynamics, Chiba University

Izumi-cho, Narashino, Chiba Pref. 275
Tel.: (0474) 72-1157

Laboratory for Pulmonary Cancer Research, School of Medicine, University of Chiba

Inohana, Chiba, Chiba Pref. 280
Tel.: (0472) 22-7171

Institute of Epidemiology, School of Medicine, University of Chiba

Inohana, Chiba, Chiba Pref. 280
Tel.: (0472) 22-7171

Brain Research Unit, School of Medicine, University of Chiba

Inohana, Chiba, Chiba Pref. 280
Tel.: (0472) 22-7171

The Institute of Medical Science, University of Tokyo

Shiroganedai, Minato-ku, Tokyo 108
Tel.: (03) 443-8111

Institute of Applied Microbiology, University of Tokyo

Yayoi, Bunkyo-ku, Tokyo 113
Tel.: (03) 812-2111

School of Health Sciences, Faculty of Medicine, University of Tokyo

Hongo, Bunkyo-ku, Tokyo 113
Tel.: (03) 812-2111

Institute of Brain Research, Faculty of Medicine, University of Tokyo

Hongo, Bunkyo-ku, Tokyo 113
Tel.: (03) 812-2111

Institute for Medical Electronics, Faculty of Medicine, University of Tokyo

Hongo, Bunkyo-ku, Tokyo 113
Tel.: (03) 812-2111

Research Institute of Logopedics and Phoniatics, Faculty of Medicine, University of Tokyo

Hongo, Bunkyo-ku, Tokyo 113
Tel.: (03) 812-2111

Division of Animal Research, Faculty of Medicine, University of Tokyo

Hongo, Bunkyo-ku, Tokyo 113
Tel.: (03) 812-2111

Institute for Medical and Dental Engineering, Tokyo Medical and Dental University

Kanda, Surugadai, Chiyoda-ku, Tokyo 101
Tel.: (03) 291-3721

Medical Research Institute, Tokyo Medical and Dental University

Yushima, Bunkyo-ku, Tokyo 113
Tel.: (03) 813-6111, 294-7311~5

Laboratory of Animal Experiment, School of Medicine, Tokyo Medical and Dental University

Yushima, Bunkyo-ku, Tokyo 113
Tel.: (03) 813-6111

Pharmaceutical Laboratory, Keio University

Shinano-machi, Shinjuku-ku, Tokyo 160
Tel.: (03) 353-1211

The Heart Institute and Hospital of Tokyo Women's Medical College

Kawada-cho, Shinjuku-ku, Tokyo 162
Tel.: (03) 353-8111

The Institute of Gastroenterology, Tokyo Women's Medical College

Kawada-cho, Shinjuku-ku, Tokyo 162
Tel.: (03) 353-8111

The Institute of Neurosurgery, Tokyo Women's Medical College

- Kawada-cho, Shinjuku-ku, Tokyo 162
Tel.: (03) 353-8111
- The Institute of Medical Technology,
Tokyo Women's Medical College**
Kawada-cho, Shinjuku-ku, Tokyo 162
Tel.: (03) 353-8111
- Brain Research Institute, Niigata
University**
Asahi-cho, Niigata, Niigata Pref. 951
Tel.: (0252) 23-6161
- Kidney Research Institute, Niigata
University**
Asahi-cho, Niigata, Niigata Pref. 951
Tel.: (0252) 23-6161
- Laboratory of Animal Experiment,
School of Medicine, Niigata University**
Asahi-cho, Niigata, Niigata Pref. 951
Tel.: (0252) 23-6161
- Institute of Adaptation Medicine,
Shinshu University**
Asahi, Matsumoto, Nagano Pref. 390
Tel.: (0263) 35-4600
- Cancer Research Institute, Kanazawa
University**
Takara-cho, Kanazawa, Ishikawa
Pref. 920
Tel.: (0762) 62-8151
- Neuroinformation Research Institute,
Kanazawa University, School of
Medicine**
Takara-cho, Kanazawa, Ishikawa
Pref. 920
Tel.: (0762) 62-8151
- The Research Institute of Environ-
mental Medicine, Nagoya University**
Furo-cho, Chikusa-ku, Nagoya,
Aichi Pref. 464
Tel.: (052) 781-5111
- Department of Virology, Cancer
Research Institute, Nagoya Uni-
versity, School of Medicine**
Tsurumai-cho, Showa-ku, Nagoya 466
Tel.: (052) 741-2111
- Germ-free Life Research Laboratory,
Nagoya University, School of Medicine**
Tsurumai-cho, Showa-ku, Nagoya 466
Tel.: (052) 741-2111
- Institute of Medical Mycology, Nagoya
University, School of Medicine**
Tsurumai-cho, Showa-ku, Nagoya 466
Tel.: (052) 741-2111
- Institute of Equilibrium Research,
Gifu University**
Tsukasa-cho, Gifu, Gifu Pref. 500
Tel.: (0582) 65-1241
- The Research Institute of Industrial
Medicine, Mie Prefectural University,
School of Medicine**
Shiohama, Yokkaichi, Mie Pref. 510
Tel.: (0593) 45-2321
- Chest Disease Research Institute,
Kyoto University**
Shogoin, Sakyo-ku, Kyoto 606
Tel.: (075) 751-3802
- Institute for Virus Research, Kyoto
University**
Shogoin, Sakyo-ku, Kyoto 606
Tel.: (075) 751-3802
- Leprosy Research Laboratory, Faculty
of Medicine, Kyoto University**
Kawara-machi, Sakyo-ku, Kyoto 606
Tel.: (075) 751-3111
- Brain Research Institute, Faculty of
Medicine, Kyoto University**
Konoe-cho, Sakyo-ku, Kyoto 606
Tel.: (075) 751-2111
- Laboratory of Animal Experiment,
Faculty of Medicine, Kyoto University**
Konoe-cho, Sakyo-ku, Kyoto 606
Tel.: (075) 751-2111
- Research Institute for Microbial
Diseases, Osaka University**
Yamadaue, Suita, Osaka 565
Tel.: (06) 877-5121
- Institute for Protein Research, Osaka
University**
Yamadaue, Suita-shi, Osaka Pref. 565
Tel.: (06) 877-5111

**Institute for Cancer Research,
Medical School, Osaka University**
Doshimahamadori, Fukushima-ku,
Osaka 553
Tel.: (06) 451-3328

**Institute of Higher Nervous Activity,
Medical School, Osaka University**
Joan-cho, Kita-ku, Osaka 530
Tel.: (06) 443-5531

**Institute of Molecular Genetics,
Medical School, Osaka University**
Nakanoshima, Kita-ku, Osaka 530
Tel.: (06) 443-8421

**Laboratory of Animal Experiment,
School of Medicine, Kobe University**
Ikuta-ku, Kobe 650
Tel.: (078) 341-7451

**Research Institute of Neurological
Science, Tottori University, School
of Medicine**
Nishi-machi, Yonago, Tottori Pref. 683
Tel.: (0859) 33-1111

**Institute of Steroid Research, Tottori
University, School of Medicine**
Nishi-machi, Yonago, Tottori Pref. 683
Tel.: (0859) 33-1111

**Institute for Thermal Spring
Research, Okayama University**
Misasa, Tottori Pref. 682-02
Tel.: (08584) 3-1211

**Cancer Institute of Okayama
University**
Shikada-cho, Okayama, Okayama
Pref. 700
Tel.: (0862) 23-7151

**Research Institute for Neurochemistry
of Okayama University**
Shikada-cho, Okayama, Okayama
Pref. 700
Tel.: (0862) 23-7151

**Research Institute for Nuclear
Medicine and Biology, Hiroshima
University**
Kasumi-cho, Hiroshima, Hiroshima

Pref. 734
Tel.: (0822) 51-1111

**Dept. of Nutrition, School of Medicine,
Tokushima University**
Kuramoto-cho, Tokushima,
Tokushima Pref. 770
Tel.: (0886) 31-3111

**Institute for Enzyme Research,
School of Medicine, Tokushima
University**
Kuramoto-cho, Tokushima,
Tokushima Pref. 770
Tel.: (0886) 31-3111

**Institute for Marine Biology &
Experimental Medicine, School of
Medicine, Tokushima University**
Seto-machi, Naruto, Tokushima
Pref. 771-03
Tel.: (08868) 8-0105

**Institute of Balneotherapeutics,
Kyushu University**
Tsurumibaru, Beppu, Oita Pref. 874
Tel.: (0977) 24-5301

**Research Institute of Angiocardiolo-
gy, Faculty of Medicine, Kyushu
University**
Maidashi, Higashi-ku, Fukuoka
Pref. 812
Tel.: (092) 641-1151

**Research Institute for Diseases of the
Chest, Faculty of Medicine, Kyushu
University**
Maidashi, Higashi-ku, Fukuoka
Pref. 812
Tel.: (092) 641-1151

**Cancer Research Institute, Faculty of
Medicine, Kyushu University**
Maidashi, Higashi-ku, Fukuoka
Pref. 812
Tel.: (092) 641-1151

**Laboratory of Animal Experiment,
Faculty of Medicine, Kyushu
University**
Maidashi, Higashi-ku, Fukuoka
Pref. 812
Tel.: (092) 641-1151

Neurological Institute, Faculty of Medicine, Kyushu University

Maidashi, Higashi-ku, Fukuoka

Prof. 812

Tel.: (092) 641-1151

Institute of Cardiovascular Diseases, Kurume University, School of Medicine

Asahi-cho, Kurume, Fukuoka Pref. 830

Tel.: (0942) 35-3311

Institute of Clinical Pathology, Kurume University, School of Medicine

Asahi-cho, Kurume, Fukuoka Pref. 830

Tel.: (0942) 35-3311

Institute of Brain Diseases, Kurume University, School of Medicine

Asahi-cho, Kurume, Fukuoka Pref. 830

Tel.: (0942) 35-3311

Institute for Tropical Medicine, Nagasaki University

Sakamoto-cho, Nagasaki, Nagasaki

Prof. 852

Tel.: (0958) 47-2111

Atomic Disease Institute, Nagasaki University School of Medicine

Sakamoto-cho, Nagasaki, Nagasaki

Prof. 852

Tel.: (0958) 47-2111

Institute of Constitutional Medicine, Kumamoto University

Kumamoto, Kumamoto Pref. 862

Tel.: (0963) 66-3111

Toxicology Institute, Kumamoto University, School of Medicine

Honjo, Kumamoto, Kumamoto,

Prof. 860

Tel.: (0963) 63-1111

Institute of Medical Immunology, Kumamoto University School of Medicine

Honjo, Kumamoto, Kumamoto,

Prof. 860

Tel.: (0963) 63-1111

Institute for Cancer Research, Faculty of Medicine, Kagoshima University

Usuki-machi, Kagoshima, Kagoshima

Prof. 890

Tel.: (0992) 56-2211

Institute for Laboratory Animal Science, Faculty of Medicine, Kagoshima University

Usuki-machi, Kagoshima, Kagoshima

Prof. 890

Tel.: (0992) 56-2211

Research Institute of Tropical Medicine, Faculty of Medicine, Kagoshima University

Hirata-cho, Nase, Kagoshima

Prof. 894

Tel.: (09975) 2-0984

Koniya, Seto-uchi-machi, Kagoshima

Prof. 894-15

Tel.: (09977) 2-0277

Research Institute of Brain and Blood Vessels, Akita

Senshu Kubota-machi, Akita 010

Tel.: (0188) 33-0115

Institute of Brain & Blood Vessels

Ohte-machi, Isezaki, Gunma Pref. 372

Tel.: (0270) 25-0112

The Institute of Physical and Chemical Research

Hirosawa, Wako, Saitama Pref. 351

Tel.: (0484) 62-1111

National Institute of Radiological Science

Anagawa, Chiba, Chiba Pref. 280

Tel.: (0472) 51-2111

National Institute of Mental Health

Konodai, Ichikawa, Chiba Pref. 272

Tel.: (0473) 72-0141

The Chemotherapeutic Institute for Medical Research

Konodai, Ichikawa, Chiba Pref. 272

Tel.: (0473) 73-3191

Chiba Serum Institute

Konodai, Ichikawa, Chiba Pref. 272

Tel.: (0473) 72-3571

The Institute of Public Health
Shiroganedai, Minato-ku, Tokyo 108
Tel.: (03) 441-7111

National Institute of Health
Kami-Osaki, Shinagawa-ku, Tokyo 141
Tel.: (03) 444-2181

National Institute of Nutrition
Toyama-cho, Shinjuku-ku, Tokyo 162
Tel.: (03) 203-5721

The National Institute of Hospital Administration
Toyama-cho, Shinjuku-ku, Tokyo 162
Tel.: (03) 203-5327

National Institute of Hygienic Sciences
Kami-Yoga, Setagaya-ku, Tokyo 158
Tel.: (03) 700-1141

Institute of Population Problems, Ministry of Health and Welfare
Kasumigaseki, Chiyoda-ku, Tokyo 100
Tel.: (03) 591-4816

National Research Institute of Police Science
Sanban-cho, Chiyoda-ku, Tokyo 120
Tel.: (03) 261-9986

Second Research Center, the Technical Research and Development Institute, Japan Defence Agency
Ikejiri, Setagaya-ku, Tokyo 154
Tel.: (03) 411-0151

National Cancer Center
Tsukiji, Chuo-ku, Tokyo 104
Tel.: (03) 542-2511

Tokyo Metropolitan Institute of Gerontology
Sakae-cho, Itabashi-ku, Tokyo 173
Tel.: (03) 964-1131

Psychiatric Research Institute of Tokyo
Kamikitazawa, Setagaya-ku, Tokyo 156
Tel.: (03) 304-5701

Tokyo Metropolitan Institute for Neurosciences

Musashidai, Fuchu-shi, Tokyo 183
Tel.: (0425) 75-0101

Tokyo Metropolitan Prosthetic and Orthotic Research Institute
Toyama-cho, Shinjuku-ku, Tokyo 154
Tel.: (03) 203-6141

Tokyo Metropolitan Research Laboratory of Public Health
Hyakunin-cho, Shinjuku-ku, Tokyo 160
Tel.: (03) 363-3231

Cancer Institute, Japanese Foundation for Cancer Research
Kami-Ikebukuro, Toshima-ku, Tokyo 171
Tel.: (03) 918-0111

The Kitasato Institute
Shirogane, Minato-ku, Tokyo 108
Tel.: (03) 444-6161

Sasaki Institute, Sasaki Foundation
Kanda-Surugadai, Chiyoda-ku, Tokyo 101
Tel.: (03) 292-2051

The Nippon Aiku Research Institute for the Care of Mothers and Children
Minami-Azabu, Minato-ku, Tokyo 106
Tel.: (03) 444-0211

Institute of Microbial Chemistry
Kami-Osaki, Shinagawa-ku, Tokyo 141
Tel.: (03) 441-4173

Meguro Parasitological Museum
Shimo-Meguro, Meguro-ku, Tokyo 153
Tel.: (03) 712-4432

The Kohno Clinical Medicine Research Institute
Kita-Shinagawa, Shinagawa-ku, Tokyo 140
Tel.: (03) 474-5861

Aeromedical Laboratory, JASDF
Sakae-cho, Tachikawa, Tokyo 190
Tel.: (0425) 24-4131

Nippon Institute for Biological Science
Akebono-cho, Tachikawa 190
Tel.: (0425) 23-1501

Railway Labour Science Research Institute

Izumi-cho, Kokubunji, Tokyo 185
Tel.: (0423) 21-5340

National Institute for Leprosy Research

Aoba-cho, Higashimurayama-shi,
Tokyo 189
Tel.: (0423) 91-8211

Research Institute, Japan Anti-Tuberculosis Association

Matsuyama, Kiyose-shi, Tokyo 180-04
Tel.: (0424) 91-4111

Kanagawa Childrens Medical Center

Mutsukawa, Minami-ku,
Yokohama 233
Tel.: (045) 711-2351

National Institute of Industrial Health, Ministry of Labor

Kizuki, Sumiyoshi-cho, Nakahara-ku,
Kawasaki, Kanagawa Pref. 211
Tel.: (044) 411-2185

The Institute for Science of Labour

Sugao, Takatsu-ku, Kawasaki,
Kanagawa Pref. 213
Tel.: (044) 977-2121

National Institute of Genetics

Tanita, Mishima, Shizuoka Pref. 411
Tel.: (0559) 75-0711

Aichi Cancer Center

Tashiro-cho, Chikusa-ku, Nagoya
Aichi Pref. 464
Tel.: (052) 762-6111

Institute for Development Research Aichi Prefectural colony

Kamiya-cho, Kasugai, Aichi
Pref. 840-03
Tel.: (0568) 88-0811

National Institute of Hygienic Sciences, Osaka Branch

Hoenzaka-machi, Higashi-ku,
Osaka 540
Tel.: (06) 941-1533

Center for Adult Diseases

Nakamichi, Higashinari-ku, Osaka 537
Tel.: (06) 972-1181

Hiroshima Branch Laboratory of the National Institute of Health

Hijiyama-Koen, Hiroshima,
Hiroshima Pref. 730
Tel.: (0822) 61-3131

Nagasaki Branch National Institute of Health

Sakurababa-machi, Nagasaki,
Nagasaki Pref. 850
Tel.: (0958) 23-1121

The Chemo-sero-Therapeutic Research Institute

Shimizu-cho, Kumamoto 860
Tel.: (0963) 44-1211

(4) Medical and Related Bodies

- Japan Dental Association**
1-20, Kudan Kita 4-chome, Chiyoda-ku,
Tokyo 102, Japan
Tel.: (03) 262-1141
- The Japan Pharmaceutical Association**
c/o Yakugaku Kaikan Bldg.
12-15, Shibuya 2-chome, Shibuya-ku,
Tokyo 150, Japan
Tel.: (03) 406-1171
- The Japanese Red Cross Society**
1, Shiba Koen 5-chome, Minato-ku,
Tokyo 105, Japan
Tel.: (03) 454-7651
- Social Welfare Organization**
"Saiseikai" Imperial Gift Foundation Inc.
c/o Mita Kokusai Bldg.
4-28, Mita 1-chome, Minato-ku,
Tokyo 108, Japan
Tel.: (03) 454-3311
- The Japan Anti-Tuberculosis Association**
1-2, Kanda Misaki-cho, Chiyoda-ku,
Tokyo 101, Japan
Tel.: (03) 291-1501
- TOHU Association (Lepra)**
c/o Shin'ei Bldg.
3-5, Uchisaiwai-cho 1-chome,
Chiyoda-ku, Tokyo 100, Japan
Tel.: (03) 501-1239
- The Princess TAKAMATSU Cancer Research Fund**
1, Nishiazabu 3-chome, Minato-ku,
Tokyo 106, Japan
Tel.: (03) 401-7161
- The WAKSMAN Foundation of Japan Inc.**
c/o School of Medicine, Keio University
- 35, Shinanomachi, Shinjuku-ku,
Tokyo 160, Japan
Tel.: (03) 353-1211
- The United Nations Association of Japan**
8, Ohte-machi 2-chome, Chiyoda-ku,
Tokyo 100, Japan
Tel.: (03) 270-4731
- Japan Medical Research Foundation**
8-2, Hirakawa-cho 2-chome Chiyoda-ku,
Tokyo 102, Japan
Tel.: (03) 239-0777
- Japan Public Health Association**
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Tokyo 160, Japan
Tel.: (03) 352-4281
- Japan Heart Foundation**
c/o Maru Bldg.
4-1, Marunouchi 2-chome, Chiyoda-ku,
Tokyo 100, Japan
Tel.: (03) 216-4602
- Japan Cancer Society**
c/o Asahi Bldg.
6-7, Ginza 6-chome, Chuo-ku,
Tokyo 104, Japan
Tel.: (03) 571-5203
- Society for Promotion of Cancer Research**
c/o National Cancer Center
1-1, Tsukiji 5-chome, Chuo-ku,
Tokyo 104, Japan
Tel.: (03) 542-2511
- Parasite Control Association of Japan**
c/o Hoken Kaikan Bldg.
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Shinjuku-ku, Tokyo 162, Japan
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**Japan Association for Tropical
Medicine**
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Tokyo 100, Japan
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**Japan Association for Maternal
Welfare**
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Shinjuku-ku, Tokyo 162, Japan
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**Japanese Organization for Inter-
national Cooperation in Family
Planning**
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Japan Medical Food Association
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21, Honshio-cho, Shinjuku-ku,
Tokyo 160, Japan
Tel.: (03) 357-8221

Japan Food Hygiene Association
c/o Shokuhin Eisei Center
6-1, Jingu-mae 2-chome, Shibuya-ku,
Tokyo 150, Japan
Tel.: (03) 403-2111

Japan Allergy Foundation
c/o Jinseido Bldg.
2-5, Hongo 7-chome, Bunkyo-ku,
Tokyo 113, Japan
Tel.: (03) 811-8156

Japan Radio-Isotope Association
28-45, Hon-komagome 2-chome,
Bunkyo-ku, Tokyo 113, Japan
Tel.: (03) 946-7111

**Japanese Association of Psychiatric
Hospitals**
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Tokyo 105, Japan
Tel.: (03) 573-2136

Medical Bureau Japan Defence

Agency
c/o Boei-Cho
7-45, Akasaka 9-chome, Minato-ku,
Tokyo 107, Japan
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**Japan Latin America Medical
Association**
c/o Keizai Kyoryoku Center Bldg.
42, Ichigaya Honmura-cho,
Shinjuku-ku, Tokyo 160, Japan
Tel.: (03) 355-3933

**Japan Private School Promotion
Foundation**
c/o Jupi Kaikan Bldg.
37-6, Nishi Shinbashi 2-chome,
Minato-ku, Tokyo 106, Japan
Tel.: (03) 341-4285

The Japan School Safety Association
c/o Shakai-Jigyo Kaikan Bldg.
3-4, Kasumigaseki 3-chome,
Chiyoda-ku, Tokyo 100, Japan
Tel.: (03) 508-9671

**The Association Private Universities
of Japan**
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**Japan Society for the Promotion of
Science**
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Tokyo 102, Japan
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**International Medical Society of
Japan**
c/o Marunouchi Nomura Bldg.
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Tokyo 100, Japan
Tel.: (03) 231-2058

**International Medical Foundation
of Japan**
c/o 6-Toyo Kaiji Bldg.
7-2, Shinbashi 4-chome, Minato-ku,
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International Cooperation Agency
 c/o Shinjuku Mitsui Bldg.
 1, Nishi Shinjuku 2-chome,
 Shinjuku-ku, Tokyo 160, Japan
 Tel.: (03) 346-5311

International Medical Information Center
 26, Daikyo-cho, Shinjuku-ku,
 Tokyo 160, Japan
 Tel.: (03) 353-1538

The Medical Information System Development Center
 c/o Akasaka Park Bldg.
 3-4, Akasaka 2-chome, Minato-ku,
 Tokyo 107, Japan
 Tel.: (03) 586-6321

Japan Pharmaceutical Information Center
 c/o Yakugaku Kaikan Bldg.
 12-15, Shibuya 2-chome, Shibuya-ku,
 Tokyo 150, Japan
 Tel.: (03) 406-1811

The Japan Leprosy Mission for Association
 c/o Sanshi Kaikan Bldg.
 7, Yuraku-cho 1-chome, Chiyoda-ku,
 Tokyo 100, Japan
 Tel.: (03) 211-3540

Japanese Medical Women Association
 19, Ichigaya Kawada-cho, Shinjuku-ku,
 Tokyo 162, Japan
 Tel.: (03) 341-0968

Japanese Nursing Association
 8-2, Jingu-mae 5-chome, Shibuya-ku,
 Tokyo 150, Japan
 Tel.: (03) 400-8331

The Japan Dietetic Association
 c/o Otsuka Bldg.
 16-6, Kita Otsuka 1-chome, Toshima-ku,
 Tokyo 170, Japan
 Tel.: (03) 918-5536

The Japanese Association of Medical Technologists
 c/o Kitasato University
 9-1, Shirogane 5-chome, Minato-ku,

Tokyo 108, Japan
 Tel.: (03) 443-0442

Japan Radiological Technicians Association
 14-18, Minami Shinagawa 5-chome,
 Shinagawa-ku, Tokyo 140, Japan
 Tel.: (03) 471-5866

Japanese Physical Therapy Association
 c/o Tokyo Metropolitan Police Hospital
 10-18, Fujimi-cho 2-chome, Chiyoda-ku,
 Tokyo 102, Japan
 Tel.: (03) 263-1371

Japanese Association of Occupational Therapists
 c/o Central Hospital, Japanese National Railways
 1, Yoyogi 2-chome, Shibuya-ku,
 Tokyo 151, Japan
 Tel.: (03) 379-1111

Japan Antibiotics Research Association
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 Shinagawa-ku, Tokyo 141, Japan
 Tel.: (03) 491-0181

Japanese Association of Biological Manufacturers
 c/o Hoken Kaikan Bldg.
 2, Ichigaya Sadohara-cho 1-chome,
 Shinjuku-ku, Tokyo 160, Japan
 Tel.: (03) 269-4749

Japan Diabetic Lay Society
 27-4, Hamamatsu-cho 1-chome,
 Minato-ku, Tokyo 105, Japan
 Tel.: (03) 437-1388

The Rheumatism Association
 c/o Central III Aoyama Bldg.
 1-3, Aoyama 4-chome, Minato-ku,
 Tokyo 107, Japan
 Tel.: (03) 405-6777~8

Children's Cancer Association of Japan
 c/o Nakagawa Bldg.
 4-11, Nishi Shinbashi 2-chome,
 Minato-ku, Tokyo 105, Japan
 Tel.: (03) 591-5534

XXIXth World Medical Assembly

Imperial Hotel, Tokyo, Japan

6–10 October 1975

Time Schedule

Oct. 6 (Mon.)

Morning:

Ceremonial Opening Session and Opening Plenary Session
National Secretaries & Officials Meeting
Topic: "WMA is only as strong as its member
associations make it"

Afternoon:

Associate Members Meeting
Medical Editors Meeting
Topic: "Can Medical Publishing Survive?"

Oct. 7 (Tue.)

All Day:

Report of Council to Assembly
Council Committee Reports
Council and Secretariat Report to Assembly

Oct. 8 (Wed.)

All Day:

Scientific Conference:
Development and Allocation of Medical Care Resources

Oct. 9 (Thu.)

All Day:

Scientific Conference Summary Session:
Development and Allocation of Medical Care Resources

Oct. 10 (Fri.)

Morning:

Other Reports and Business
Confirmation of Assembly Venues

Afternoon:

Elections
Any Other Business
Minutes
Adjournment

Secretariat, Preparation Committee for the 29th World
Medical Assembly

c/o The Japan Medical Association
5, Kanda-Surugadai 2-chome, Chiyoda-ku, Tokyo 101
JAPAN

Tentative Time Schedule for the Scientific Session

“The Development and Allocation of Medical Care Resources”

October 8 (Wednesday) Specil Lecture and Sub-sessions			October 9 (Thursday) Summary Discussions
9:00	SPECIAL LECTURE		9:00
10:00	Coffee Break (move to respective sub-session hall)		9:30
10:20	Medical Economic Approach Chairman: Prof. I. Yamada Co-chairman: Dr. R. Schloegell	Medical Approach Chairman: Dr. A. Wynen Co-chairman: Prof. K. Tsuchiya	Medical-economic approach(continuation) Discussion(including comments from the floor)
10:20	LECTURE Dr. G. Rosch	LECTURE Prof. M. Kurata	Administrative Approach Chairman: Dr. L. Grisdale Co-chairman: Prof. H. Katsunuma
11:05	Comment Prof. S. Fujino	LECTURE Prof. P. Marcos	Summary discussions Chairman: Prof. H. Katsunuma Co-chairman: Prof. K. Emi
11:25	Discussion (between lecturer and commentator)	Comment Dr. A. Wynen	Summary report on administrative approach Prof. S. Tamura
12:00	Discussion (between lecturer and commentator)	Discussion (between lecturer and commentator)	Summary report on medical-economic approach Prof. S. Fujino
14:00	LECTURE Dr. J. P. Newhouse	LECTURE Dr. J. F. McCreary	Summary report on medical approach Dr. T. Wagatsuma
14:45	Comment Dr. G. A. Goldberg	Comment Dr. A. Wynen	Summary report on medical approach Prof. A. Koizumi
15:00	Discussion (between lecturer and commentator)	Comment Dr. E. Holst	Discussion (including comments from the floor)
15:20	LECTURE Dr. B. Kehrer	Discussion (between lecturer and commentator)	Discussion (including comments from the floor)
16:25	Comment Prof. K. Emi	Discussion (including comments from the floor)	Discussion (between lecturer and commentator)
16:40	Discussion (between lecturer and commentator)	Discussion (including comments from the floor)	Discussion (including comments from the floor)
17:00	Discussion (between lecturer and commentator)	Discussion (including comments from the floor)	Discussion (including comments from the floor)

DEVELOPMENT AND ALLOCATION OF MEDICAL CARE RESOURCES

Medical Economic Approach

Dr. George Rösch

CREDOC, France

Medical care is an important and growing part of the National Product of developed countries (from 5 to 7%). We are therefore obliged to consider the economic aspects of this "sector". However, peculiarities that exist in the functioning of the "system" must be noted.

1. Overall, medical activities are "services" rendered. In National Health Budgets, services account for about 80% of the total, while products (mainly medicine) account for 20%.

Service activities have five distinct features, each consequential to the next:

- They necessitate the simultaneous presence of both producer and consumer. This precondition exists in other service sectors such as transportation, teaching, etc.
- The production and distribution "network" must be decentralized to put it within reach of the user.
- Mass production is excluded, as services are almost always carried out by small and average enterprises.
- Economy of scale cannot be applied, or is limited, contrary to the rule for mass production.
- The type of production that necessitates services results in difficult and weak productivity growth.

2. It is noteworthy that the medical care sector is becoming increasingly "collective." In all countries, even those with the most liberal economic policies (the U.S.A., the Federal Republic of Germany, Japan) to some extent or another, medical services have become services financed, developed and organized by national or local authorities—from hospital investment to health insurance systems. There are four chief effects of this.

- Planning, whether through national or local initiative, is increasingly important.

- The sector's growth depends largely on decisions made by public authorities.
- Medical economic activities are increasingly "out of the market" and more or less efficient automatic mechanisms ensuring certain equilibria of "market economy" are no longer operative.
- An increasingly large portion of prices are fixed, not by market mechanisms (the law of supply and demand) but by negotiations conducted by collective organs such as trade unions, Social Security Systems, or even more categorically, by public officials.

3. Progress in bio-medical sciences, and techniques developed through that progress, have been extraordinarily rapid over the past thirty years. Such progress results in at least three things:

- The cost of these highly refined techniques rapidly increases of necessity, for they require very important equipment of high quality and durability on one hand, and greater numbers of qualified and specialized personnel on the other.
- The medical care sector will grow rapidly as do all "peak" sectors: air transportation, plastics, electronics, etc.
- Requirements for quality care will increase considerably, not only by doctors but by patients and close relatives. Any error or negligence causing death or injury will be increasingly difficult to accept.

4. The "call" for medical care (if one does not wish to use such abstract terms as "demand" or "need") also presents certain peculiarities:

- There is a basic difference between the need for medical care and most other personal needs. This need arises almost haphazardly at some time in life, unexpectedly and beyond control, such as by accident, fire, etc.
- At the same time, the importance of means employed during illness, accident or infirmity also varies haphazardly. They can be either minimal (such as a bandage placed on a cut) or maximal (permanent kidney dialysis), sometimes exceeding the financial resources of the patient.

The two above particularities lead to the need for help from insurance systems.

- Finally, it is evident that medical care which endeavors to satisfy the needs of health and life (the instinct of preservation), appears to be a priority consumer product in aggregate economic activity. Resources allocated for a health policy explicitly set the price to prevent infirmity, or save lives.

From these different points of view, peculiarities and restraints, a choice can be made in the distribution of resources allocated for medical care.

DEVELOPMENT AND ALLOCATION OF MEDICAL CARE RESOURCES

Medical Economic Approach

Dr. Joseph P. Newhouse

RAND Corporation, USA

As a science, economics is concerned with the allocation of scarce resources to achieve society's ends. It is therefore quite appropriate for an economist to speak on a subject which at first glance might appear well outside his field of expertise—the allocation of resources in medical care.

A convenient way to approach the question of the allocation of resources is to use a time-honored set of questions that economists consider the central questions of economic organization. These questions are: What? How? For Whom? The answer to the "What" question determines what goods and services are produced by a society; the answer to the "How" question determines how the goods and services are made; the answer to the "For Whom" question determines who consumes the goods and services that are made.

In the context of resource allocation in medical care, I shall interpret the "What" question to mean: How much medical care is produced relative to other goods and services and what determines this amount? Put in a more concrete fashion, what determines the fraction of national resources that go to produce medical care? The "How" question I shall interpret to mean: Given a decision on the fraction of society's resources that are to be devoted to medical care, how shall medical care be produced? For example, what should the mix between hospitals and physicians be? The "For Whom" question I shall interpret to mean: What determines the wage or salary of those engaged in producing medical care services? I consider these three questions in turn.

From a casual reading of commentaries on medical care, one might suppose that how many resources are devoted to medical care is technologically determined by a concept called need; that the sick have needs that should be treated, and there is general agreement on how to treat them. I present statistics showing the percentage of their national resources that various countries devote to medical care, and also compare surgery rates and rates of hospitalization and length of stay. In all cases

there is considerable variation across countries. The measures of health that we have do not vary in any systematic fashion with the fraction of resources, and therefore it should not be supposed that countries that spend more are in fact sicker. I conclude that the amount of its real resources a country chooses to devote to medical care is something that the society through one or another mechanism chooses. The consequences of the choice are important. If more resources are devoted to medical care, fewer are available for food, clothing, housing, transportation, education environmental betterment, and other goods and services that individuals desire. The converse is, of course, also true.

I then explore the mechanisms by which various societies determine the amount of resources in medical care. Virtually all rely on the public sector to some degree; in some there is also reliance on the private market, while in others the use of the private market is minimal. I discuss the reasons why the public sector is involved in resource allocation decisions in almost all countries, and the advantages and disadvantages of greater or lesser reliance on the public sector.

Solutions of the "How" and "For Whom" problems across various countries depend upon the mix between public sector and influence and private market influence. Even with strong public sector involvement in the "What" question, the influence of the public sector may be much less in the answer to the "How" question; for example, the distribution of physicians between urban and rural areas may be left to the individual choice of the provider. (Of course, it may be a conscious choice on the part of the Ministry of Health to do so.) As in the case of the "What" question, an appropriate solution to the "How" issue depends on what those in the society want from medical care, and particularly the emphasis between "curing" and "caring."

The solution to the "For whom" question also appears to vary across countries because the relative income position of the physician varies. Why this might be true and some of its consequences are touched upon.

In conclusion I emphasize two points: 1) There are many possibilities in medical care resource allocation; countries have different fractions of their national resources devoted to medical care, different ways of delivering medical care services, and pay their providers of medical services different amounts. These arrangements are not random, but reflect a conscious choice. 2) There is no universal answer to the questions of "What," "How," and "For Whom." The answers each society gives will be shaped by its circumstances and preferences.

DEVELOPMENT AND ALLOCATION OF MEDICAL CARE RESOURCES

Medical Economic Approach

Dr. Barbara H. Kehrer

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Introduction

This paper discusses resource allocation to medical care in the broader context of the allocation of resources to the production of health. Particularly as we look forward to the 21st century, especially among the high income countries in the world, increasing consumption of traditional medical care services may be less important to health than improving the environment or resisting its deterioration and in fostering life styles through which individuals may make positive contributions to their own health.

In addition, some basic economic concepts will be presented to highlight the kinds of contributions economists can make to discussions relating to resource allocation in the health sector. These contributions are colored by the realization that a finite quantity of productive resources must somehow be rationed among alternative uses. The paper then turns to the complex ways in which strictly medical care resources and other resources interact in the production of health. Finally, at a more micro-economic, or individual, level, the role of the physician in determining how resources are allocated to medical services is addressed.

Allocation of Resources to Health: An Economist's Perspective

A basic notion in economics is that available productive resources are insufficient to satisfy all human wants, the desire for good health being one of them. The fundamental economic problem is the allocation of scarce resources among competing uses. One might assert for social reasons that medical services should not be rationed among individuals on the basis of ability to pay. But this does not preclude economic considerations from making a useful contribution to the ways in which resources are allocated to health and to the development of socially effective medical services delivery systems. Economics can contribute a perspective for

analysis of these important issues. True, many decisions regarding allocation of resources to health are made collectively through the political process rather than by the "invisible hand" of classical economics. Yet it is particularly important when such decisions are made by a political process that economic considerations be taken explicitly into account.

What types of considerations would the economist wish decision-makers to take account of as they determine the allocation of resources to health? The following are some examples:

- Society probably does not wish to avoid all health problems at any cost. Health is not everything to most people. Individuals make choices every day which indicate they place less than an infinite value on their own lives and value still less the health of others. There are other objectives which have higher priorities than health as indicated by the preferences expressed by society.
- While health care may be considered a necessity, it must compete for scarce resources with other uses which may be even more important for human sustenance: adequate food and shelter, for example. That is, an extra unit of GNP when spent on food and shelter may have a greater impact on social welfare than if it were spent on health.
- Health may be produced by means of a wide variety of alternative combinations of medical care resources (for example, physicians, nurses, drugs, and hospital beds) but also with alternative combinations of medical resources and other resources (for example, better housing). In planning for development of medical care resources, policy makers should try to take account of the relative efficiencies of the various possible resource combinations in the production of health.
- Resources may be devoted to activities which affect health in the present or to activities which affect health in the future. Policy makers should be aware that alternative allocations of medical resources may involve a trade-off between present and future health. Moreover, they should attempt to take account of the relative costs and benefits of such alternative allocations of resources.

A "National Health Budget"

The totality of resources allocated to the *enhancement* of health by a political unit is neither clearly defined nor easily quantified. Most measures available to us may report the amount of money a country spent on health activities during a given time period. But such measures suffer from a variety of shortcomings. First, they exclude many items which have important impacts on health but are classified instead by the wants they satisfy primarily (for example, housing and education). Moreover, some resources allocated presumptively to improve health actually may be destructive of health (for example, the drug thalidomide). Finally, though the proportion of a nation's GNP devoted to health expenditures may

increase as economic development proceeds, some part of such increased expenditures may be required to offset the negative effects on health of that same process of economic development (for example, mental illness and the effects of pollution).

Role of the Individual Physician in the Allocation of Resources

The issues considered thus far are generally macroeconomic in nature—that is, they deal with resource allocation to health at the economy-wide level. It is appropriate also to discuss allocation of resources to health at the microeconomic level of decision-making by the individual physician. Decisions made by physicians involved in patient care play a crucial role in determining the details of resource allocation to the production of medical care. Such decisions take place in the office and the hospital. Moreover, they affect a whole variety of costs (or resource allocations), including the money costs of services borne directly by patients, the costs of care paid for by third parties, such as government health insurance plans, the cost of time patients spend to receive care, and transportation costs borne by patients. Many doctors may be unaware of the importance of their decisions to the allocation of scarce resources. In addition, they may base their decisions on technological considerations without taking sufficient account of the associated cost implications. Finally, the organization of medical services delivery systems may lack appropriate incentive mechanisms to promote cost-conscious decision-making behavior by doctors. As long as physicians remain the leaders of the medical care team, the decisions they make on a day-to-day basis will have profound effects on the allocation of resources to health.

DEVELOPMENT AND ALLOCATION OF MEDICAL CARE RESOURCES

Medical Approach

Prof. Masakazu Kurata

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Among the various problems involving medical care resources, I would like to discuss that of medical care facilities.

Due to the progress made in medicine and technology, methods of providing medical service have undergone continued specialization, thus responding to an ever-increasing demand for medical services. True, these divers methods have proved effective in their own way for various individual problems, and great progress has indeed been made in this respect. However, from the perspective of the continuity and comprehensiveness of medical care, it is evident that services at present contain many duplications and defects in function and much discontinuity. These shortcomings being combined with a variety of problems encompassing other factors within the structure of care, medical care is now faced with a crisis, and a movement toward integrated medical services has thus been initiated. This of course applies to medical care resources as well.

We must here concern ourselves with how to advance the allocation and development of resources so that medical care moves toward such an integration of methods of medical care, and it goes without saying that regional medical care delivery systems lie at the core of this matter.

Among the various aspects of medical care, as far as personal care is concerned, the concept of regional medical care has in recent years been in harmony with the particular characteristics of the locale. In general, however, it is difficult to say that mechanisms to balance the supply and demand for medical care within a region are being considered. I would thus like to touch upon two or three problems in this respect.

The first problem is how to establish the geographical unit for regional medical care. In concept, this unit would be the area in which primary and secondary medical care can be interwoven both comprehensively and continuously. Human mobility and the range of movement in life activities, which are expanding from extremely restricted proportions to motion within and throughout an ever-greater area, should naturally be regarded as basic factors in defining this unit.

The second problem is that of regional medical care planning. Medical care delivery is planned and conducted under the initiatives of the independent physicians acting on their own. The planning body, however, should first be systematically organized. The duty of this organization would be to define the structure of the medical care system and establish procedures and rules for medical care. In order to do so, it must have a systematic inflow of information about the various elements that comprise medical care—for example, medical care facilities, medical care personnel, medical education, the economics of medical care, and related administrative topics. Such a body would also consider medical care resources in accordance with the methodology of planned medical service and advance the systematization of medical service. In recent years, there has been much progress made in data processing technology, and thought must be given to introducing such technology where and as necessary to medical care systems.

Here, after taking into account each area's specific characteristics, we must also review medical care resources. Medical care planning utilizes and develops existing resources to the maximum possible extent, but in doing so, there is also a need to understand the particular problems of these resources. For example, one problem of hospitals is the inadequacy of their classification according to functions performed. Hospital classification today is limited to that according to founder, number of beds, medical specialties provided, and similar factors. Viewed functionally, it is difficult to find out which hospital can offer what types of medical care technology or what must be done to incorporate a hospital into the medical care structure of the region as a whole. Without such an approach, regionalization will remain but a dream.

Another example would be group activities by physicians or hospitals. While there is a need for horizontal coordination among the various types of primary and secondary medical care being administered within a given region, there is of course a concomitant need for continuity between these two levels, and it is in this respect that attention must be given to physicians' group activities. I also wish to point out the great influence such activities can have on the development of medical care resources.

DEVELOPMENT AND ALLOCATION OF MEDICAL CARE RESOURCES

Medical Approach

John F. McCreary, O.C., M.D.

Univ. of British Columbia, Canada

Medical resources, their development and allocation, represents a topic of tremendous breadth. One could select any of numerous types of medical resources to discuss. Hospitals, at various levels, ambulatory care centres, family planning programmes, mental health centres,—to name just a few. In order to produce something meaningful it seems necessary to focus down on to some one aspect of medical resources. Of the many available perhaps the most appropriate is medical manpower and it is the development and allocation of medical manpower that I shall discuss.

The first question which one must ask is: medical manpower for what? There are obviously many different goals for which medical manpower is produced depending on factors which are usually beyond the influence of medical educators or even the policy makers within the profession. Let me examine these extraneous factors and try to strip down to the essential points within the power of educators and other physicians to influence.

1. The first perhaps most important of the factors is the government's philosophy in the field of health.

Until a relatively sort time ago there was little variation from one nation to another in terms of national health policy. In general, it consisted of attempting to supply traditional physicians, by whatever name, to treat patients, usually with traditional medical methods, but sometimes with methods peculiar to that country. In general, health policy was curative rather than preventive.

During the last twenty-five to thirty years there has been increasing deviation from tradition. A considerable number of nations have elected to pursue an indigenous health policy which may be quite different from that in use elsewhere. Such policies vary significantly. Many have developed much greater emphasis on preventive rather than on curative methods. Many have decentralized the health care system almost completely to the local communities with the health care workers selected by their fellows

and proceeding upwards in the hierarchy and inward into the central organization by sequential selection from among their peers. Some have re-established the acceptability of the forms of medicine indigenous to the country and very different from Western medicine. Examples of these will be detailed.

2. A second factor over which we as physicians have little or no immediate control is the cultural expectations of the population (examples).

3. Still another influence is economics. It is obviously unrealistic to expect a country with an average annual income of one hundred dollars to produce as many physicians as one whose average income is ten times as great. Nevertheless, a form of health care of very considerable effectiveness can be developed with a tiny fraction of the usual number of physicians providing that their services are used with wisdom and imagination.

Economics can play a much less obvious role as well. In one country a situation existed for some years in which the central government would share costs with the provinces only if treatment was carried on in the acute general hospitals. As a result this most expensive form of health care was encouraged to the exclusion of all others. In the same country medical care costs would only be shared with provinces if delivered by a physician rather than a nurse, dietician or other health worker. In the face of these economic incentives what chance was there to introduce new and less costly forms of health care?

4. The level of health education of the population and their health expectations are factors which can be changed but only slowly and which effect the development of numbers and nature of physicians.

5. Of all health costs by far the largest percentage is initiated by physicians themselves. In countries where no control exists on numbers of physicians or numbers of specialists the development of medical manpower is likely to be very different from countries in which some control exists. In one highly developed country the percentage of the medical population providing general as opposed to specialist services declined from 42.7% to 22.9% from 1960 to 1969. What import will this change produce on the nature and costs of health care in the future?

6. The nature of the preparation of other health professionals is rarely under direct medical control. However, integration and co-ordination of the training of all health persons is an important factor in ensuring that each is used in a manner to maximize his or her contribution as much as possible.

All of these six forces are largely beyond the influence of the medical profession to change directly. However, there are two aspects of the development of medical manpower over which we as medical educators

do have control. The first of these is the suitability of the preparation of the physician. Curricula in medical schools have developed slowly and they are exceedingly difficult to change. I suspect that in all parts of the world there is doubt in some minds about the suitability of the material taught to prospective physicians. In my own part of the world, which has been extremely conventional in the past, there are grave doubts indeed that we are preparing our physicians adequately.

Increasingly, the concentration on basic medical sciences in the early part of the medical course is questioned. Surely, basic medical sciences spread throughout the course would be more meaningful and would be retained longer than when they are concentrated in the first two years in an environment in which they cannot be correlated with clinical conditions. Despite a remarkable improvement in the teaching of mathematics, physics, chemistry and other hard sciences in high schools we have insisted on quite as long an exposure to these subjects in the pre-medical university years. Should we continue to do the bulk of our clinical teaching in a university-dominated referral hospital where, in the main, students work with patients suffering from unusual and complicated conditions? Should we not be doing much more of our clinical training outside of hospitals on ambulant patients with usual problems? Surely, that is what the physician is going to be doing. One suspects that the majority of physicians trained, at least on the North American continent, would be very critical of the nature of their preparation after they had experienced a few years of practice and they would be right in so doing.

How long should the preparation of a physician take? It would be difficult to defend successfully the present very specific lengthy period. A small but significant number of schools in my part of the world are shortening the duration of study, but on the other hand some are lengthening it. A careful, controlled study of the effectiveness of physicians prepared in different ways and for varying periods of time would be time-consuming and costly but in the context of the huge sums spent on medical education around the world it would be very worthwhile.

There is a second area in which as educators we have a measure of control of factors influencing the numbers and nature of physicians trained. We are far removed now from the day when physicians provided health care virtually alone or perhaps with the assistance of a few nurses and still fewer dentists. During the present century health professionals, nutritionists, psychologists, occupational and physio-therapists—to name just a few—have developed in response to needs which physicians were not meeting. However, the training programs for these developing groups have not been in any way integrated into the training of physicians. Some of these health professionals are trained in universities, some in colleges, some in hospitals. Even those located in universities rarely have any association with the faculty of medicine. And so today we have large numbers of young people entering programs to train them to provide health care

each year. Tests indicate that all have similar characteristics in that they are interested in working with, and for, people. Whether they enter nursing, medicine, nutrition or dentistry is largely a matter of accident—of their sex, their socio-economic background or similar influences. Although basically similar when they enter their training programs, they are very different when they emerge. They have been exposed to a training which concentrates on their own professional role almost exclusively. They have been taught all about the privileges and rights of their professional group and almost nothing about what others have to contribute. Usually they have been taught in totally separate streams from other health professionals. It is not surprising that when they graduate they do not easily come together into a smoothly functioning team, each contributing his maximum effort to the care of patients. The training of health professionals in most parts of the world prepare them to work as individuals and not as part of a group. Certainly, in my part of the world the use of over-trained individuals to do routine tasks in the field of health is possibly the most costly mis-management of which we are guilty.

Somehow these individuals must receive their training together. They must learn to respect what each other has to contribute and how to best utilize the services of all.

I have had the personal experience of attempting to achieve this end at my own university for the past fifteen years and I assure you that it is not simply achieved. (Details here of what has been learned.)

In these two areas—appropriateness of training and integration of training with other health professionals—we as physicians and educators do have considerable influence and it seems that we have not exercised that influence to the degree that we should.

When we look at the allocation of medical manpower we find another situation in which government policy is of overwhelming importance and the influence of physicians themselves is relatively slight.

There are some parts of the world where physicians are told by governing bodies exactly where they will do their work and with whom. It is likely that in such countries a rational distribution of medical manpower results and there is reasonably similar availability of health care to all persons. Such nations, however, are not in the majority. In most parts of the world there is little control over where the new physician locates and begins his practice. Certainly, on the North American continent there is no control whatever. Under the conditions of no control the results are invariably the same. Physicians crowd into the cities, into areas where weather and other conditions are favourable. They avoid rural and sparsely populated areas particularly if climatic conditions are unpleasant. Further, a great many physicians find that after graduation they feel ill-prepared to assume the responsibilities of practice and are more inclined to remain in the protective hospital setting in which they have received their training. In this setting they proceed to further specialist

training whether or not they have the abilities or the characteristics for it.

For several years a number of physicians in my country have advocated a system which has not been accepted but which I believe would achieve an adequate distribution of physicians and correct many of the defects of the present non-system. One could see that with minor variations the plan could be workable in any country.

There is no country in the world today, to my knowledge, where medical students bear the total cost of their training. In fact, in most areas medical training is competed for strenuously and, once admitted to the training program, the individual pays a small fee as compared to the costs of his complex and expensive education. In significant areas of the world fees are non-existent. Since government is providing most or all of the costs, should they not have some, at least temporary, control over the location of the physician in the interest of ensuring equality of the health care among the people?

Our suggestion is that following graduation and a year of practical training, if that is part of the program in the country, all graduates would owe three years of their lives to practice in a part of their country which would not necessarily be their first choice of location to live. By listing under-doctored areas or under-staffed government services a wide variety of posts would be available. To the degree that it were possible each physician would have his first choice or at least one of his top choices in which to locate. During the period in which a physician occupied such a location he would require a guaranteed income either from a salary or from an additional sum over and above free-for-service revenue to remunerate him to a degree comparable to what he would have received under other circumstances.

At the termination of the three year period the physician would be entitled to one full further year of training in a subject area of his choice without reduction of income. Thereafter, he would be free to set up practice where he wished or to carry on with specialist training but at the rate of remuneration compatible with a training program.

Such a plan would seem to have a number of desirable results:

1. Within a year or two of its implementation complete coverage of under-doctored populations or programs would be achieved.
2. Specialist trainees would have had experience with real-life medicine and be in a better position to select their further career.
3. A certain number of physicians who had had the previous experience in rural communities would find the life to their liking and would continue in it.
4. The program could be varied to meet the problems of individual nations. If a major problem was building up a cadre of teachers and scientists the top 10% or 20% of students, as appropriate, could be forgiven their rural service and instead remain in educational institutions to

train in teaching or research. It would be essential to set high standards for the accomplishment of such students and if they failed to make satisfactory progress they would lose the privilege which they had won by their academic efforts in undergraduate years.

5. The program could be varied also in the number of years involved. Three years would probably be suitable in my own country but this figure could be varied upward or downward depending on the nation's needs.
6. Because the duration of the period is limited, physicians could look forward to practicing in the manner that they wished and would not lose interest and function poorly because they were so uncomfortable in the life to which they had been assigned. Also, because every graduate was involved the problems inherent in the voluntary system of subsidization would not appear.

It does seem that some such plan would ensure an adequate allocation of physician and do much to guarantee that the health care of all population groups in a country was reasonably similar.

In conclusion, I have tried to concentrate this talk on medical manpower, to stress those areas in which we in medicine can exert some control, and have outlined a plan for allocation of medical manpower which seems logical and, with variations, applicable in many of the world's areas.

DEVELOPMENT AND ALLOCATION OF MEDICAL CARE RESOURCES

Administrative Approach

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Medical care resources include the following:

- a. Material resources—in the form of health facilities such as hospitals, health centers, health units, and so on assigned to health care.
- b. Manpower—professional technical, and auxiliary groups.
- c. Economic resources—expenditures on health care, on personnel, and on certain important branches, among them such programs as nutrition, medicines, and maintenance.

Given the need to use existing resources to the best possible advantage, avoiding duplication and excessive costs and programming activities in accordance with priorities based on a community's health hazards and needs, it is essential to find out first what resources are available—that is, to make a partial diagnosis of the situation.

The development and allocation of resources follow:

- a. Material resources
 - (1) Number of health facilities—this information is of limited value since it may or may not be related to the number of beds. A given country may have a few hospitals but enough beds, or the reverse may be true.
 - (2) Number of beds—a knowledge of the number of inpatient beds where patients remain for 24 hours or more in a country is one of the basic elements in planning. It has been estimated that for acute cases there should be 4.5 beds per 1,000. In developing countries this may be far from being reached but what is considered as an adequate ratio could probably be lowered if better use were made of resources, with longer hours in the out-patient clinics (mornings and afternoon; not, as in many countries, mornings alone), shorter average lengths of stay, and higher rates of occupancy.

Knowledge of the distribution of hospital beds within a country is important for planning for services of the entire population. Survey reports in most countries invariably indicate a better bed/population ratio in capitals and large cities than in the municipalities and rural areas, yet it is in the latter areas where about 75 per cent of the population live and therefore, are also in great need of services.

(3) Hospital installations and equipment, size of hospitals.

It used to be that all hospitals in our country vied to be complete and sophisticated in installations and equipment regardless of bed capacity. This brought about a high cost of operation, especially of the hospitals of 50 to 100 beds or less, due to the high investment in facilities installations and personnel. The cost of operation was passed on to the consumer (patient).

Lately, we have come to realize that medical care costs could be reduced by organizing three levels of services which can be called primary, secondary, and tertiary through which each patient receives care from the least expensive resource capable of providing that care, referrals being made to the higher category hospital as necessary. The size of hospitals, and the degree of sophistication of installations and equipment, therefore, depend on the above concept.

A survey of facilities and installations would bring to light any uneven distribution of equipment and the duplication accompanying this unevenness. With proper planning and coordination of services, equipment such as x-ray machines, electron microscopes, cobalt machines, etc. could be redistributed to bring about a better return of investments. Any excess equipment in any given area could be sent to other hospitals and specialists that make use of these machines could coordinate their activities with resulting advantages for the community and for economy of service.

(4) Organization and administration of hospitals. It is suggested that there be centralization of standards and directives and decentralization of activities with staff and budgetary authority delegated.

The division of hospital activities into technical and administrative is standard. On the one hand is a team of physician service chiefs and other professional and technical heads and, on the other, a team of administrative officials; the hospital directors coordinate the activities.

Cost accounting in a hospital is very helpful for awareness of its financial condition, for good utilization of resources, and for the formulation of a health plan.

Out-patient clinics are the basic units for the provision of integrated medical services. A well organized ambulatory medical care makes possible the rational use of hospital beds by preventing unnecessary and prolonged hospitalization.

(5) Output performances

Hospital output is measured by means of universally accepted indicators of performances. Together with demographic information and other

local characteristics, this knowledge has made it possible to determine whether or not additional hospitals, clinics and other health facilities should be built. It is also of the utmost importance in the preparation of health plans, in the setting of priorities, and so on, and in the drafting of hospital programs; specifically, then, it makes possible an evaluation both of the need and of the demand for services.

b. Manpower

A study of medical personnel usually involves some effort to relate the supply of physicians to the need for their services. Among the methods used are:

- The physician-population or physician-patient ratio
- The relationship of mortality and morbidity to medical services
- The average number of patients seen per doctor per unit of time (producer approach)
- The number of patient-doctor contacts per unit time (consumer approach)
- Economic growth factors
- The prevalence of preventable diseases.
- The number of vacancies in professional posts (as indicating needs for physicians in specific institutions, shortages of physicians in specific specialties, and so on).
- Studies of function or utilization.

Each of these methods may provide only limited information. In other words, no single indicator can be used to determine whether a given country has enough physicians or whether it should increase the number for the execution of programs in the health sector.

Measures adopted to alter the situation created by the shortage of physicians.

- The number of medical schools has to be increased. This solution, however, will not begin to bear fruit for another 10 to 15 years, provided that at the same time the existing medical schools enlarge their enrollments.
- Medical school curricula may be shortened and orienting instruction toward the training of practitioners suited to the medical-social conditions of the country.
- Improve the geographic distribution of physicians. We hold that inspite of democratic processes the state can make impositions on any citizen. Upon the police power of the state depends the security of the social order, the life and health of the citizens, the comfort of an existence in a community, the enjoyment of private and social life and the beneficial use of property.

One principle involved in the police power is expressed by the well-known maxim, "salis populi suprema lex est.," meaning "the welfare of

the people is the supreme law.”

Other measures conducive to proper utilization of medical manpower are greater financial incentives (including housing for physicians in interior communities), periodic fellowships for professional advancement in the large centers, and improved working conditions through larger resources for the facilities.

Other non-medical professionals and auxiliaries.

These include dentists, nurses, pharmacists, veterinarians, sanitary engineers, and architects, nursing auxiliaries, midwives, social workers, laboratory technicians.

While knowledge of how large the various professional and auxiliary groups are, and how they are distributed geographically is useful as an indicator in drawing up a sectorial health plan related to plans in the other economic and social development sectors, it does not provide adequate information on their utilization and out-put. Hence, for each country and each health facility it is better to know how many hours each professional, technician, or auxiliary works. This information is necessary in the planning, development, and distribution of resources for medical care.

c. Economic resources—Health expenditures.

The cost of the health services furnished to a community depends on the equipment, buildings, manpower, and financial resources that are absorbed by these services. Consequently, the monetary cost of health services is measured by pricing the resources, equipment, and labor used to provide them. This cost forms part of the rational distribution of the national income and is therefore limited by the capacity of a country's economy to finance services of all kinds.

DEVELOPMENT AND ALLOCATION OF MEDICAL CARE RESOURCES

Administrative Approach

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Summary

Administrative factors can profoundly influence the development and allocation of medical care resources. The example to be analysed here consists of the regulation, by government and other parties, of the process of discovery and development of new therapeutic drugs. This example has relevance to the development of other medical care resources.

My interest in these matters began when I compared the patterns of introduction of new drugs, and the therapeutic practices resulting therefrom, in the United States and Britain over a ten-year period following the enactment in 1962 of the Kefauver-Harris Amendment to the Food, Drug and Cosmetic Act in the United States. These studies documented the relatively slower and less complete patterns of new-drug introduction that arose in the United States compared with Britain, and the discernable impact which this had on standards of drug therapy and therapeutics in the United States¹⁻³). A subsequent study showed that with the advent of a more medically relevant approach to regulation in the U.S. after 1971, these therapeutic differences between the two countries were greatly reduced⁴).

Since these early studies, we have gone on to look at other effects of regulation on drug development, particularly those on the processes of discovery and innovation^{5,6}). In the course of this work it has become apparent that there are substantial areas in which administrative factors can result in suboptimal use of the world's resources for the development of new therapies.

The following suggestions are made to ensure more efficient use of the world's resources.

1. Reduce international duplication in routine drug research requirements, and replace this by better-conceived requirements that add to our knowledge and ability to use therapies more rationally.

In setting up their criteria for admitting a new therapy to the market, it is common to find that many countries demand that certain studies already performed elsewhere be repeated within the country concerned. In most such cases, this applies to the clinical studies of efficacy or safety, but in some countries even the animal studies (pharmacology and toxicology) must be repeated as well.

It is doubtful whether much is gained by a country that requires repetition of routine animal studies that have already been performed by competent workers abroad. The only justifications for this would be, for example, if a country has specific expertise or concern with certain toxicities, or where particular relevant animal strains are available that have not already been used abroad.

It is likewise doubtful whether much is gained by requiring routine repetition of proof of a drug's clinical efficacy where it has already been proved in good studies abroad. Routine administrative requirements for reduplicating work at either the clinical or the animal levels divert the limited world resources available for developing new therapies into unproductive activity. Few, if any, medical advances have ever resulted from the expenditure of resources in this manner.

On the other hand, there are certain areas in which local studies of a new drug candidate could prove of great medical and scientific value. Facilitating these studies by administrative means would help to use the world's medical resources more efficiently. There areas include:

a) Investigation of the drug in specific diseases that are important in the country concerned:—e.g., diseases of tropical or cold climates; rare diseases; and diseases for which world experts exist locally.

b) Investigation of the drug in certain strata of the population. For example, if the drug is to be marketed in a country where there are different racial groups, one should look at the pharmacokinetics of the drug—particularly its metabolism—as well as at its safety and efficacy, in these different groups. If some racial groups are particularly susceptible to diseases with which the drug is involved, then these groups should be highlighted for special study.

2. Improve the design, methodology and intensity of monitored release and post-marketing surveillance of drugs that are marketed.

There is a large contrast at present between the amount that is known about a drug in its pre-marketing, development stage, and the amount that is known after the time it is marketed. It is generally agreed that all parties, especially patients, would benefit if post-marketing surveillance were improved, so that patients could gain access to new therapy sooner and yet more safely than occurs at present.

This has particular relevance internationally, because a country that releases a drug first is in a unique position to provide post-marketing surveillance information for the rest of the world.

These considerations emphasize the need for better methodology to be developed so that monitored-release and post-marketing-surveillance data are not only obtained, but obtained in forms that are medically and scientifically meaningful and internationally acceptable and compatible.

3. Improvement of drug utilization by post-marketing influences.

At present there are in many countries various systems that exist for influencing drug utilization after the point of marketing. While these systems have a great potential to improve drug therapy, this potential is not generally being realized or even monitored at present. It would be of benefit to all parties, particularly the patient, if the objectives of such systems were clearly defined, and specifically included the improvement of drug utilization; and if evaluation systems were set up to ensure that the systems did function to meet such objectives. Such an evaluation system will need to include cost (risk)-benefit measures both of drugs and of the control system.

The above points are all matters in which, through administrative action, the world's limited medical resources could be utilized more effectively, to the patients' benefit.

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