

# Disease Management Reporter in Japan

February 2007 **No.6**

A study group on disease management practices in Japan, organized by Sompo Japan Research Institute Inc., recently held two meetings on the subject of specific methodology for the support of motivation and behavior modification among the recipients of disease management services. Seiji Suzuki, CEO of Well Being Corporation, spoke at the October 2005 meeting, and Takashi Nakamura, Director of the Cardiology Department at Saiseikai Shiga Hospital, spoke at the February 2006 meeting. Each speaker presented a case study of their institution's program, followed by a question-and-answer session and discussion among members of the study group.

In this issue we will present the two case studies based on those lectures, supplemented by additional information gathered subsequently, and also summarize the issues discussed at the study group meetings.

## Activities of Well Being Corporation: Motivation through group training and follow-up by e-mail and pamphlets

### Summary of Well Being Corporation

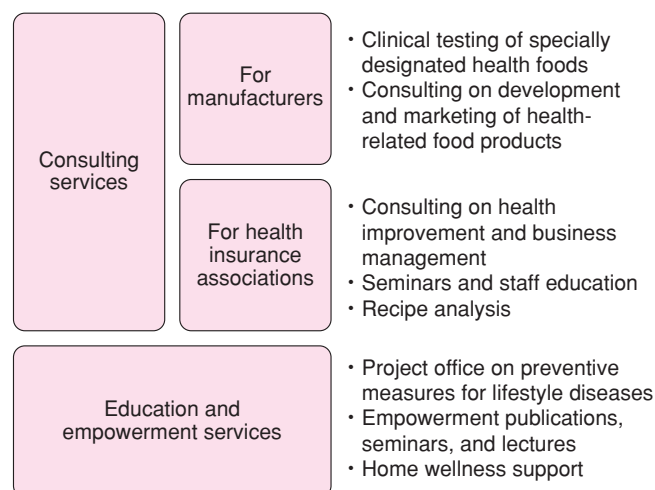
As medical expenses are rising in Japan along with a declining birth rate and increasingly elderly population, Mr. Suzuki felt that a shift was needed from the conventional pattern of health management that is dependent on medical institutions toward independent (autonomous) health management. He established Well Being Corporation in May 2001 as a venture business for consulting on preventive medicine, focused on the control of lifestyle diseases.

Well Being Corporation provides consulting services for manufacturers of specially designated health foods, including clinical testing services; and consulting services for health insurance associations, including health improvement and business consulting services and services for education and empowerment concerning the prevention of lifestyle diseases. (See Fig. 1).

Health insurance associations are essentially the health plan administrators for self-insured corporations. The consulting services offered by Well Being Corporation provide the staff of health insurance associations with ideas, techniques, and tools for instruction in lifestyle disease prevention, and also educate and empower the staff so that they are ultimately able to conduct health instruction independently. The basic

concept of the instructional method is to support the service recipients to attain a state of wellbeing themselves, by promoting behavior modification through an approach that focuses on their own thinking.

Fig. 1. Business activities of Well Being Corporation



Source: Website of Well Being Corporation (<http://www.123wb.jp/html/kaisya02.html>)

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## Basic approach regarding behavior modification

In his lecture, Mr. Suzuki introduced the points that he considers to be most important, including key role of behavior modification in lifestyle disease prevention, the need to take an approach that focuses on the thoughts and minds of individual service recipients, and the specific methods used. The following is a summary of his lecture.

### 1. Reasons why people at risk for lifestyle diseases cannot change their behavior

One reason why people at risk for lifestyle diseases cannot change their behavior is that lifestyle diseases are silent diseases, and therefore patients have no physical perception of their deteriorating state of health. Another reason is that people do not tend to maintain an active awareness of their health. Although everyone hopes that they and their family members will be healthy, people have a tendency to get caught up in a day-to-day routine that takes their health too much for granted, and this tends to determine their health-oriented behavior. The third reason is that people think up excuses for why they cannot take steps to prevent lifestyle diseases, such as exercising or eating differently. People feel bad when they think candidly about the things they don't do or cannot do, so they think up elaborate excuses in order to avoid feeling bad.

### 2. Reasons why lifestyle disease prevention by physicians is ineffective

One reason why lifestyle disease prevention by physicians is ineffective is that they lack the time and the skills to take an approach that focuses on the thoughts and minds of patients. Other reasons include that preventive care is reimbursed at a low rate under medical insurance, and the fact that this is generally not an area of research that interests most physicians.

In the area of medical treatments, physicians, nurses, and other medical professionals can administer medicines, perform surgeries, and conduct other acts of medical care on their own. However, in preventive medicine, the patients must change their own behavior. Medical professionals tell the patients about important changes they need to make, but they do not check on how well the patients have absorbed this information. As a result, the patients fail to understand and carry out their advice. It is necessary to improve the communication skills of medical professionals.

### 3. Behavior choices motivated by desire for a fulfilling life

We ask this question during guidance for lifestyle disease prevention: "You only have one life; how do you want to live it?"

If the person has a desire for fulfillment or to reach clear goals in life, we try to develop motivation for attaining health based on the those desires by saying, "Health isn't everything, but if you lose your health you've lost everything. You can still make choices now for a healthy life. What are you going to do?"

When people accept this point, it is not so difficult to get them to make healthy behavior choices.

## 4. Coaching techniques

There are limits on how much human beings will tolerate, but people are even willing to stay up all night if they're doing something they truly enjoy. Therefore, when providing guidance, it is important to present advice in positive terms ("You should...") rather than negative terms ("You should not..."). During guidance, we ask people what they like to do and what they want to eat. This is a simple coaching method. The coach listens for the direction that the recipient wants to go in, and then tells them how to get there or gives them a supportive boost in that direction. The recipient trusts and listens better to a coach who supports the recipient's own goals.

Promoting behavior modification is not a medical issue but an issue of social science. It is important for the coach to take a sympathetic and understanding approach while making use of psychology and coaching skills.

## 5. Motivation through group training and follow-up by email and pamphlets

In guidance for lifestyle disease prevention, it is not very effective to provide information to promote behavior modification by means of the mass media, including the Internet and mailings, without having first established interpersonal relationships. We begin by holding group training sessions that are enjoyable, so that the recipients want to participate again. It is more effective to provide health information by email and pamphlets after interpersonal relationships have already been established.

## 6. Importance of subjective evaluation

In general, scientific evidence is emphasized when evaluating the effectiveness of guidance for lifestyle disease prevention. However, it is difficult to use blood pressure, blood sugar, and other test results alone as evidence to show whether the recipients have really changed their behavior and attained a state of wellbeing. The question is whether the patients themselves feel that they are in good condition and a state of wellbeing. Therefore, it is important to use a questionnaire to directly ask the patients how they feel, something which cannot be measured by medical tests. Although the patients' own responses to the questionnaire are subjective, they can be used very effectively to monitor behavior modification.

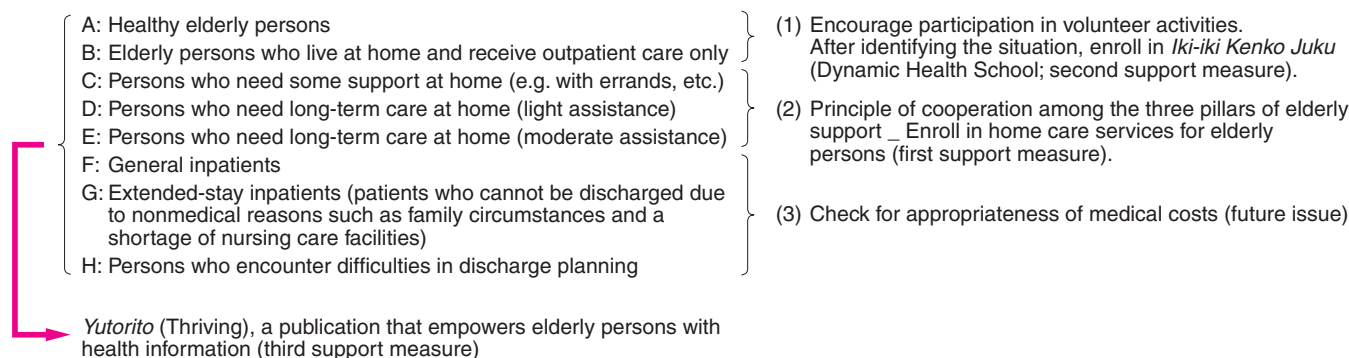
## Specific examples of efforts to promote behavior modification

The lecture reported on specific efforts by the health insurance associations of Fujifilm, Sony, and Mitsubishi Electric to promote behavior modification. These cases are described below.

### 1. Fujifilm's health insurance association

Well Being Corporation provided consulting services to the health insurance association of Fujifilm Corporation for about two years, beginning in April 2004, regarding its health services. Fujifilm's health insurance association has a special health insurance program for retirees, so elderly retirees are included among the insured popu-

Fig. 2. Stratified support measures



Source: Prepared by Sompo Japan Research Institute Inc., based on materials from Well Being Corporation.

lation. The insurance association has the goal of providing a wide-range of health support to elderly persons. However, they are faced with the issue of how to manage health services amid rising medical costs for elderly persons.

Well Being Corporation considered support measures for elderly persons based on the dual goals of improving quality of life and supporting independence for elderly persons while also promoting economy in medical care. It planned three support measures, stratified according to the insured person's state of health. (See Fig. 2.)

One support measure is to provide home visits to persons who need support or medical care under the long term care insurance system. The purpose of this endeavor is to determine the problems faced by elderly persons and their families and support them in solving those problems by coordinating services provided among the three pillars of elderly support: long term care insurance system, the health insurance association, and the government; in order to control medical costs and improve quality of life.

The second support measure, called *Iki-iki Kenko Juku* (Dynamic Health School), is for comparatively healthy elderly persons, including those who live at home and receive outpatient care. Its purpose is to improve the physical and mental activity levels of elderly people by giving them an opportunity to spend truly enjoyable times with compatible friends, and also to improve their health by providing them with knowledge related to healthy eating and other aspects of health.

The third support measure is a quarterly publication called *Yutorito* (Thriving), which provides health information to insured persons and dependents over the age of 60.

#### A. *Iki-iki Kenko Juku*

*Iki-iki Kenko Juku* (Dynamic Health School) is a group-based health program for persons insured under Fujifilm's health insurance association and their dependents living in the area near Fujifilm's main plant (Minami-Ashigara). This program began in October 2004 and has been held monthly ever since. As stated above, its purpose is to provide an opportunity for elderly persons to spend truly enjoyable times while increasing their knowledge and interest regarding health-related topics.

Each session begins with a health checkup, health consultation, and physical exercise in the morning. Lunch is combined with nutritional instruction. In the afternoon, there are club activities and lectures on a specific topic (See Fig. 3). For the club activities, participants split up

into smaller groups according to their own interests, including non-exercise activities. The program is arranged so that each participant can do the activities they enjoy with the companions they choose.

A bulletin is issued after each session. The bulletin reports on activities at the previous session and provides information on the next session. It is used as a motivational tool to encourage continued participation and to gather new participants. There were 44 participants at the first session, and a year and a half later, the number had grown to about 130.

In addition to staff of Fujifilm's health insurance association and Well Being Corporation, volunteers are recruited from among the participants to help run this program. The goal is to promote better health by getting people to participate as volunteers who are involved in the operation of the program, instead of merely as clients.

Fig. 3. Sample schedule of *Iki-iki Kenko Juku* (Dynamic Health School)

10 AM	Health checkup and health consultation
11 AM	Walking, stretching, and dumbbell exercises
12 PM	Lunch and nutritional instruction (box lunches with winter vegetables, etc.)
1 PM	Club activities (sports club, chorus club, computer club, movie club, training club, chess ( <i>Igo</i> ) club, and walking club)
3 PM	Lecture (A different topic is chosen each month, and useful information on healthy behavior is provided in a lecture format.)

Source: Prepared by Sompo Japan Research Institute Inc., based on materials from Well Being Corporation.

#### B. *Yutorito*, a publication that empowers elderly persons with health information

Mr. Suzuki believes that the essence of health is individual empowerment, and even though the results are not as dramatic as in cases of intervention for high-risk patients, the most important issue is to build the infrastructure that enables people to think about health on an everyday basis. *Yutorito* (Thriving) was launched as a means of empowering a wide range of elderly persons, not only high-risk patients, by providing health information to insured persons and dependents over the age of 60. Its articles provide information on topics such as fulfillment, nutrition, and exercise, and introduce elderly persons who are still leading active and fulfilling lives.

In general, publications issued by health insurance associations are often thrown away without being read. To buck this trend, *Yutorito* is designed to capture the

interest of its recipients, and readers are invited to participate in editorial meetings which are held twice each month.

**2. Sony's health insurance association**

The health insurance association of Sony Corporation had been providing health education in the form of group training as a health service program, but it attracted few participants, and particularly among women. Mr. Suzuki planned *Kokoro to Karada no Kirei Juku* (Mental and Physical Beauty School), a group-based health program aimed at women with children, as part of his company's consulting services for Sony. The reasons for targeting women are two-fold: women hold the key to a family's health management in their roles as wives and mothers; and it is just as important to educate and empower women with regard to their own health and lifestyle disease prevention, as it is for men.

Women are generally busy with housework and childcare, and have trouble finding the time to go out to socialize. Even if they do get out, it is hard for them to relax and enjoy themselves if they take their children along. Recognizing that women have a high level of interest in health but have trouble getting out of the house, Mr. Suzuki thought that a health program could attract many participants as long as the women both wanted to go, and also felt able to go. To gather information on the actual circumstances and needs of women with children, he interviewed the editor-in-chief of a publishing company that publishes many women's magazines on childbirth and parenting. He then developed a plan for a group training program.

Fig. 4 shows a sample outline of *Kokoro to Karada no Kirei Juku*. The program is distinguished by the fact that mothers sign up together with their children, and they participate in separate activities after arriving at the site. This means that women can participate without having to worry about their children. The program is also distinguished by special activities to encourage repeat participation by both the mothers and the children, including aroma yoga for the mothers and crafts for the children. At the same time that they are enjoying themselves, the mothers and children are also participating in a nutritional education class where they learn and think about health.

For follow-up after the training program, participants are given a *Kokoro to Karada no Kirei Juku* Review Book. Later, they receive a bulletin and a survey questionnaire. The goal is to foster a continued interest in health among participants who have already been motivated through group training.

**Summary of discussion at the study group meeting**

After Mr. Suzuki's report to the study group, participants discussed issues related to promoting behavior modification with regard to guidance for lifestyle disease prevention. The discussion is summarized below.

**1. Motivational staff and training**

- The methods for promoting behavior modification include both methods for coaching of service recipients by nurses and other leaders, and methods to cre-

Fig. 4. Sample outline of *Kokoro to Karada no Kirei Juku* (Mental and Physical Beauty School)

- Target audience: Women, ages 20-49, and children ages 4-8 (Consultation is available for children outside that age range. Fathers may also participate.)
- Fee: ¥ 1,000 (~\$9) for adults, ¥ 500 (~\$4.50) for children (additional costs are covered by the insurance association)
- Schedule

	For mothers	For children
1 PM	Aroma yoga	Nutritional education
2 PM		Crafts
3 PM	Nutrition seminar	Fitness for children (using the crafts they made)
4 PM	Nutritional consultation by a nutritionist	

Source: Prepared by Sompo Japan Research Institute Inc., based on materials from Well Being Corporation.

ate synergy by forming groups of service recipients. The described endeavors include both of these kinds of methods and are quite interesting.

- To encourage behavior modification, it may be more effective to hear from a familiar person or from someone who previously had poor lifestyle habits and actually changed, rather than to hear from a medical professional.
- Lifestyle diseases and chronic diseases are knowledge-based illnesses, and patients cannot conduct self-care unless their knowledge is increased. In the past, physicians and nurses have not generally made much of an effort to promote behavior modification, but it is now necessary for them to develop new skills.

**2. Approach to lifestyle improvement in the community**

- To prevent lifestyle diseases, it is necessary to begin providing education in healthy habits during childhood, including how to eat healthy meals. It is considered important to provide education in conjunction with school lunches, and to provide education aimed at families.
- If the parents have problematic eating habits, focusing on the family could have the effect of expanding a distorted situation. Therefore, it is important to create new communities within the region and to empower the children in those communities with knowledge.

**3. Approach to people who are not health-oriented**

- To obtain the participation of people who are not very health-oriented, it is necessary to make use of the company organization. If executives make a clear declaration on disease prevention, and the company is used to ensure that the intentions of top executives are carried through to the workplace, this can be very effective in creating a positive atmosphere promoting disease prevention.

## Efforts by Saiseikai Shiga Hospital: HEALING, a behavior modification program that starts with cardiovascular system checkups and cardiac rehabilitation

### Summary of the lifestyle disease outpatient clinic

Social Welfare Organization Saiseikai Imperial Gift Foundation Shiga Hospital (abbreviated as Saiseikai Shiga Hospital), located in Ritto, Shiga Prefecture, is a general hospital with 393 beds and 20 clinical specialties.

Saiseikai Shiga Hospital was founded in 1937 in Otsu, and relocated upon invitation by the municipal government of Ritto in 1962. It then underwent additional construction and added more beds to meet regional needs.

The hospital is centered around a ten-story hospital building which was completed in 2004. It also includes a critical care center, health management center, special care nursing home, facilities for nursing care and health care for the elderly, visiting nurse services, and nursing school. It provides emergency medical care, advanced specialized medical services, public health services and preventive services, as well as measures to support the elderly. Saiseikai Shiga Hospital is a comprehensive regional medical center.

Five years ago, this hospital established a lifestyle disease outpatient clinic, amid a gradual increase in patients who needed medical care for lifestyle diseases. Takashi Nakamura, Director of the Cardiology Department, worked to develop a behavior modification program in this clinic. The clinic now operates a behavior modification program called Heart Disease Prevention and Lifestyle Intervention Guidance (HEALING), based on the principle of treating lifestyle diseases in a way that changes patients' minds.

HEALING consists of two main programs. One is a behavior modification program for primary prevention, provided to persons who have many risk factors for coronary artery disease. The other is a cardiac rehabilitation program for secondary prevention, provided to patients who have already developed coronary artery disease.

### Basic concepts of HEALING and content of guidance

At a study group meeting, Dr. Nakamura reported on the basic concepts related to guidance for improvement of lifestyle diseases and the specific methods used. The following is a summary of his report. The report explained the concepts and structure of the program, interspersed with information on the actual medical examinations. This summary will also follow the same format as his presentation.

#### 1. Basic concepts related to guidance for improvement of lifestyle diseases

According to a survey by the Cleveland Clinic (U.S.), 38% of patients do not adhere to their short-term medical treatment instructions. With regard to lifestyle habits, 75% of patients fail to follow instructions. The survey found that 50% of patients have forgotten their instructions the moment they leave the examining room. When I saw this data, I felt that it was absolutely true. When we started the lifestyle disease outpatient clinic,

physicians were only looking at test results and other patient data, and there was a deeply ingrained notion that changing those results depended on medical care by the physicians. Patients were given very little guidance.

We knew that confronting patients in the conventional approach, in terms of biomedical facts and somatic medicine, was not effective. Therefore, we conducted a questionnaire survey of patients in order to identify the problems with conventional medical examinations. Responses were obtained from 375 persons. Respondents indicated the following kinds of impressions:

"The guidance was provided in a one-sided manner."

"I felt that there was no way I'd be able to do it."

"They ignored my personal circumstances."

"I wanted to raise objections."

"The guidance was lacking in detail and specifics."

"I felt depressed because I knew I couldn't do it."

Based on these survey results, we adopted a style for medical examinations that focuses on changing the mind and behavior of the patient, instead of the conventional style for medical examinations which has looked at test data alone. Specifically, we aim to determine the patient's level of understanding of nutrition and exercise therapy, personal circumstances, and values before the medical examination, and to identify changes afterward in effort level, behavior, sense of burden, confidence, and values.

When guidance about a lifestyle disease lasts only a minute or less, it cannot be effective. Therefore, we conduct a structured conversation of about ten minutes during the medical examination, based on conversational management. The conversation uses casual phrases, including appreciative and comforting words, but it is structured. Behavior modification is not a medical issue; it must be addressed in terms of the concepts of psychology, coaching, and conveying a sense of sympathy and understanding.

Through the use of psychological and social models and behavioral science, it is possible to provide lifestyle disease guidance even if the recipient has no medical knowledge. However, it is not possible to provide lifestyle disease guidance without an understanding of the relationship between behavior and the mind. The key to successful improvement of lifestyle habits is a grasp of the emotional aspects. The HEALING program was developed as an educational tool and conversational management method that follows the patient's emotions and emphasizes the patient's own initiative.

#### 2. Behavior modification using cardiovascular system checkups (primary prevention)

The primary prevention program is characterized by the use of test results as a behavior modification tool, rather than as a predictive marker. In lifestyle disease guidance, test indicators must be used to support behavior modification by the patient, instead of being used by a physician to determine the patient's state of health. Patients should be provided with indicators that support positive learning, so that they not only realize that they

ought to do something about the problem, but also understand that they will improve if they make an effort. The tests should be highly reproducible, inexpensive, and noninvasive.

Based on these concepts, testing for arteriosclerosis in a primary prevention program consists of two combined circulatory system tests: an ultrasound examination that determines the thickness of the carotid artery (carotid artery ultrasound echo), and a test that determines pulse wave velocity as a measure of blood vessel hardness (sphygmography). In the carotid artery ultrasound echo test, patients can see the thickness of their own carotid artery on a monitor. This has the advantage of being visually quite effective, but since the changes in carotid artery thickness are very small, it has the disadvantage that patients may not fully grasp the changes. Meanwhile, with sphygmography, it is easy to provide an intuitive image by expressing the degree of arteriosclerosis in terms of vascular age. Patients can readily understand the changes in numbers which reflect lifestyle habits and other factors.

The primary prevention program is subdivided into four stages, based on the level of a patient's readiness to change their behavior. These are the stages from pre-reflection to reflection; reflection to preparation; preparation to implementation; and implementation to maintenance.

**A. From pre-reflection to reflection**

The patient's emotions and ideas are identified at this stage. Before providing information, the physician needs to build a relationship of trust with the patient, so that the patient will have an open mind and positive attitude. Care is taken to elicit the patient's excuses for not exercising or eating right while listening in a sympathetic manner.

For example, when the physician asks whether patients are getting enough exercise, patients give a variety of excuses based on personal, social, family, or cultural circumstances, such as "For my job, I drive around in my car to make sales calls and then I work on the computer until late at night," or "I'm so busy taking care of my parents or grandchildren that I can't find a moment to myself." The physician can build trust by acknowledging this information and expressing sympathy with comments such as, "Your schedule is more demanding than mine. It's great that you found the time to come for a medical examination."

Even if the patient is not able to make immediate changes in lifestyle habits, future goals are suggested for the patient to consider in advance, i.e. "You should stop smoking before you have children," or "You should start exercising once your children are independent." It is also important to sow seeds that will help prepare the patient to receive information in the future: "Please come for another examination before then, because we don't want anything bad to happen to you before that time."

**B. From reflection to preparation**

At this stage, it is important to provide patients with in-depth knowledge and heighten their interest. Arteriosclerosis testing is performed at this stage. To promote behavior modification, it is important for the

test to provide an occasion for self-motivated learning that is perceived as relevant and necessary.

Prior to testing, patients are given a questionnaire which raises awareness and gives them the opportunity to review the current situation of their own lives. To make sure they understand the purpose of the test, we explain in advance that the speed of pulse transmission reflects the extent of hardening and blockage of arteries, and that lifestyle diseases make the arteries harder. When the blood vessels are soft, the shock of blood pressure is cushioned by the aorta, and organs such as the brain and kidneys are not affected by the shock. However, when the blood vessels are hard, a shock is transmitted as soon as the heart contracts, and this damages peripheral blood vessels. With this kind of explanation, patients get an intuitive understanding which prepares them to receive information from their test results.

After testing, patients are asked to reevaluate their own lifestyle habits based on the test results, promoting changes in their understanding and attitudes.

Several innovations are used when presenting the test results. We have prepared a rubber model to show blood vessel hardening (see Fig. 5) which patients can feel for themselves. We have also prepared a graph that plots blood vessel hardness against age (see Fig. 6), and we have patients use this to evaluate their own test results.

**C. From preparation to implementation**

In the preparatory stage, there are three major tasks. First, to prepare for action, the patient's decision-making balance is shifted in the direction of improving lifestyle habits. For example, if the patient has a negative image of exercise and doesn't like to feel sweaty or complains of being out of shape, we emphasize a positive image as much as possible. In order to change their attitude, we

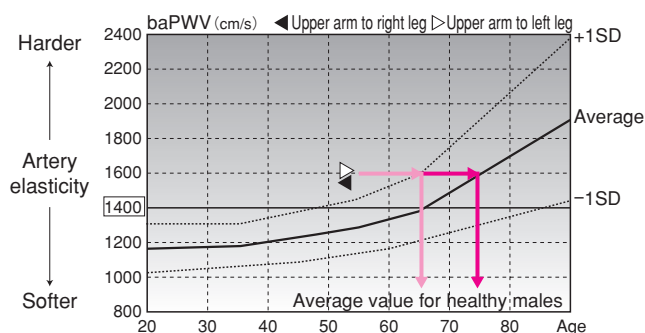
Fig. 5. Blood vessel hardening models



Source: Dr. Nakamura's lecture materials

Fig. 6. Relationship between age and pulse wave velocity

Relationship between age and pulse wave velocity in healthy males  
Left and right brachial-ankle pulse wave velocity (baPWV)



Source: Dr. Nakamura's lecture materials

tell them that some people have the opposite opinion: It feels good to sweat, and they have become fit and in shape.

Next, we use a set of lifestyle change proposals to decide on specific behavioral goals. If the patient intends to exercise, we ask when, where, and how they will exercise; whether they expect to be able to keep it up; and what they expect their future to be like. The patient is given an image of future success with a greatly improved quality of life. In order to keep the set of lifestyle change proposals from appearing too pushy, it includes a note explaining that these are some of the steps taken by other patients. There are several different types of proposal sets. For beginning exercisers, the examples of behavioral goals include wearing a pedometer or getting a dog. The proposals on diet for single persons and men working away from their families include behavioral goals such as looking at the calorie content of box lunches. For housewives, the proposed behavioral goals include not going shopping on an empty stomach. After deciding on behavioral goals, we have the patients write them down themselves in order to formally declare their intention to rise to the challenge. We also write supportive messages to encourage them that they will definitely be able to succeed this time.

The last task is to form clear goals for outpatient treatment. We try to get the patients to adopt a proactive attitude to lifestyle improvement and to express a desire to get well enough that they won't have to come back to the clinic.

#### D. From implementation to maintenance

At this stage, to support the patient's behavior, we monitor not only test results but also the patient's behavior, feelings regarding behavior, and thoughts. First, we get the patients to monitor and evaluate their own actions by asking whether they were able to achieve the behavior goals as anticipated, and what fraction of the goals they were able to attain. Next, to monitor the patient's feelings regarding that behavior, we ask what was the most difficult and about the patient's state of mind after exercising.

Last, we monitor the patient's thoughts. The patient is progressing toward a change in values if he reports thoughts like these: "In the past, I always went to bed as soon as I got home because I was tired from my desk work, or I just lay around on Sundays. But I've realized that when I exercise, it takes away my fatigue. Now I know that I'm doing something good for myself by walking."

If we perceive even a small change by monitoring the patient's thoughts, we encourage them by saying "You're really making an effort," or "I'd like to help other patients by telling them about your experience," in order to promote a change in values.

### 3. Cardiac rehabilitation (secondary prevention)

We provide exercise, nutrition, and psychological counseling for patients who have already developed coronary artery disease under a secondary prevention program called the Ritto Heart Club. This club consists of a core program which includes goal setting, exercise and nutritional guidance, and an optional program which includes strength rehabilitation, smoking cessation, and

stress management.

The content of guidance is what is generally known as monitored exercise therapy. However, the concept is counseling integrated with exercise therapy. Although it appears similar to exercise therapy, the main goal is to induce behavioral modification in the patient through counseling. Since the program aims to get the patients to stick with exercise at home and learn about healthy eating while also exercising, it is considerably more effective when continued on a weekly basis.

Providing these services in a rehabilitation facility offers various advantages, since the environment is more patient-oriented than the case of counseling in a medical clinic. For instance, patients can share their respective complaints with each other while participating in the program. With the effects of endorphins released during exercise, a more positive psychological state can also be anticipated.

Another effective aspect is that when the biological monitoring is left up to the laboratory technicians, and a coordinator such as a nurse or nutritionist handles the patient's personal interviews and narrative medicine, the physician can concentrate on counseling, including input of medical information and proposal of goals.

The original texts used in guidance after testing and during cardiac rehabilitation, "Visceral fat and lifestyle disease" (mainly in the area of awareness) and "Self guide on improving lifestyle habits to draw on your own strength" (mainly in the area of information), are available to the general public on the website of the Cardiovascular Internal Medicine Department (<http://www.biwa.ne.jp/~ssh/sinryoka/junkan/junkanidx.html>) [in Japanese].

### Summary of discussion at the study group meeting

After Dr. Nakamura's report to the study group, participants discussed issues related to promoting behavior modification. The discussion is summarized below.

#### 1. Changing physicians' style of medical care

- There are not many cases of physicians creating behavior modification programs for patients. This may be related to the education that physicians generally receive.
- Ordinarily, when examining patients for lifestyle diseases physicians have spent a very short time, i.e. a minute or less. Their style has been to focus only on hard test data such as blood pressure, weight, and blood test results. Physicians get bored when they use only this approach of somatic medicine. It is desirable to help other physicians to discover that it is truly interesting to provide counseling that is uniquely tailored to each individual through conversation with the patient.
- Changing physicians' style of medical care and shifting away from the conventional model of lifestyle disease treatment is expected to become a major issue nationwide. In order to change to the new model, study is also needed on the way it is valued under the system of compensation for medical treatment. To that end, it will be necessary to standardize the program and show

evidence concerning its effects and costs.

## 2. Obtaining medical professionals and improving their motivation

- The presence of nurses for care coordination is important in the division of roles in a behavior modification based exercise program. Questions need to be addressed on how to go about hiring, education, and on-the-job training for these human resources.
- In programs where patients have a high level of satisfaction, medical professionals also tend to be highly satisfied. Some medical professionals do have a high level of motivation. So the issue is how to resolve the economic aspects which currently do not reinforce these activities.
- Holistic medicine is being advocated in clinical training programs for physicians, and a style of medical care that incorporates psychological and social models as part of the training is expected to become more widespread.

## 3. Using community resources

- This program is based on the use of hospital facilities, including physiological examination facilities and rehabilitation facilities. There are multiple facilities on the large hospital campus, creating an environment where local residents tend to gather, and that makes it possible to provide a complete lifestyle disease prevention program at a single hospital. In a city like Tokyo, it would be difficult to provide everything at a single hospital. However, it would be possible to transplant the system by using community resources such as medical clinics and community health centers.
- Pulse wave velocity testing can be performed at a community health center. A similar program could be launched at a such a health center by providing appropriate information before and after testing.
- The sets of proposals and other tools should be made openly available to the general public at facilities such as city halls, so that people can obtain this information at any time without having to go to a hospital.

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### About our organization

Sompo Japan Research Institute Inc., a think-tank of Sompo Japan Group, was established in 1987 as the first think-tank in the non-life insurance industry in Japan. We conduct research and development, and provide information in various areas such as insurance, medicine, healthcare, social security and finance.

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