New Roles of Registered Dietitians in the Twenty-first Century

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We at the Niigata University of Health and Welfare have decided to publish this Journal (Vol. 1 No.1) to introduce ourselves and to commemorate the establishment of the Niigata Society of Health and Welfare. Of the five departments of undergraduate education at the Niigata University of Health and Welfare, the department of Health and Nutrition aims to train students to be Registered Dietitians. In order to explain the aims and general curriculum outline of our new department, it will be useful to examine the changing roles and accreditation of dietitians in Japan and start with a historical overview. Until now, training for Japanese dietitians and Registered Dietitians has been conducted within undergraduate department of Home Economics at universities and colleges and Human Ecological Studies (Seikatsu-ka) at Junior colleges. In March 2000, the "Law Regulating Dietitians" was amended to meet the needs of the new century. Two major areas of revision — (1) Nutritional therapy and (2) Nutrition care of the aged — are now important issues — and issues that are reflected our faculty's curriculums.

1. Historical Overview of the Training and Recognition of Dietitians in Japan

A systematic course of study for dietitians was introduced for the first time in Japan when Dr. Tadasu Saeki founded a dietetic school in 1925. Dr. Saeki, who had returned earlier after studying nutrition in United States, advocated the importance of nutrition education for Japanese and proposed the establishment of a nutrition research center by the government. However, because his initial proposal was not accepted, he established a private nutrition laboratory. In 1921, this laboratory came under the jurisdiction of the Ministry of Home Affairs, and Dr. Saeki became the first head of the renamed National Nutrition Research Institute. He considered it necessary to train professionals to improve health and nutrition conditions throughout the population and to this end established his private dietetic school. In 1926, fifteen students completed the course and became the first dietitians. They went on to improve nutrition conditions in many areas of Japan. However, they were not officially accredited because the government had not established any system or requirements to be a dietitian. After the appointment of a dietitian to the Health Department of Ehime Prefecture in 1928, many prefectures employed dietitians. The government officially established a nationwide system of Public Health centers after 1937. Dietitians had a recognized position at these centers and their status stabilized as their community work was appreciated. The Ministry of Health and Welfare stepped in to regulate dietitians during the war years as nutrition of the populace became an important issue until it adopted a system to approve qualifications for dietitians in 1945. More than one year of dietetic

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education was required. With the adoption of education reforms under the Occupation in 1950, this period was revised to more than two years. Following the introduction of the new post-war education system, a training course for dietitians was instigated at departments of Home Economics at universities and in the course of Human Ecological studies at junior colleges. Universities, colleges, junior colleges and dietetic schools offering dietitian training numbered 83 at that time. In 1963 a revision of the "Law Regulating Dietitians" led to the establishment of the position of Registered Dietitian and reforms and expansion of college-level training facilities. Initially dietitians could become Registered Dietitians without taking any examination if as a student they had graduated from a four-year university course that was designated by the national government as a facility to train Registered Dietitians. Students who trained at two-year or three-year dietitian programs could take a qualification examination after passing their coursework and then working to provide guidance on nutrition at designated health or school lunch facilities for one to two years. However, following the revision of the law in 1985, all dietitians who wanted to be Registered Dietitians were required to take a national examination. The Committee for the Qualification of Registered Dietitians in the 21st Century was established in 1997 to consider the contents of training and work, or practical requirements, and what the national examination should entail in the future. Details of amendments to the law were then announced by the Ministry of Health and Welfare in March 2000.

2. Work and Role of Dietitians: Historically and Today

1) Administrative Management and Guidance on Nutrition.

As discussed above much recognition and work of Japanese dietitians has been in government facilities and offices promoting public health. Dietitians have been mainly involved in administrative management and guidance/education on nutrition conducted by government run public health centers, community health promotion centers and municipal and county (rural) offices.

The Saeki Dietetic School was founded in 1925 to train the first dietitians. A nutrition research department was established in the Public Osaka Institute of Hygienic Science in 1927. Public Institute of Hygienic Sciences were established in five major cities and dietitians were posted to the public health sections of six prefecture offices in the northern, rural Tohoku District from 1936. The following year, the "Law on Public Health Center" came into effect to improve nutrition conditions, and public health.

Japanese public health centers have served as community-based sources of education and referral that have provided the populace with health checks (and referral), prenatal and child health care, and vaccinations. In 1938, the Ministry of Health and Welfare was established, and dietitians were posted nationwide at public health centers. Their role was to supply guidance on nutrition and so improve national health in part to support the nationwide mobilization for war. In recent years government certified Registered Dietitians continue to work in public health centers on regional and community education about nutrition and healthy life-styles. Registered Dietitians in municipal offices also provide nutrition guidance to school and health institutions, foodservice facilities (such as local public hospitals and nursing homes for the aged) and help implement nutrition improvement programs at designated public health centers in certain cities or wards. Registered Dietitians administer programs and educational campaigns that emphasize prevention and positive life-style

habits of the population, while increasingly affluent in some segments, is also rapidly aging especially in rural areas.

2) Oversight of School Lunches at All public (and Many Private) Primary and Middle Schools.

Buddhist volunteers provided school lunches for the first time in Japan to poor pupils at a primary school in Yamagata Prefecture in 1889. The current school lunch system originated in the delivery and utilization of surplus skimmed milk given by the American Occupation to schools in the period after World War II, when the nutrition of most or many Japanese, especially in cities was severely comprised.

In 1954, the "School Nutrition Law" was enacted to promote the mental and physical growth of children and students, to improve the eating habits of the populace, and to improve and promote the school-lunch system. Government mandated provision of school-lunches comprises three categories: meals, supplementary foods, and milk. At present, lunches consisting of bread or steamed rice, milk, and main dishes are provided at primary schools and most Jr. high schools. Meals are usually provided at every lunch times on school days. The frequency of using rice as the staple food has markedly increased reflecting the preferences of various communities. The number of schools with kitchen has decreased since the government established a grant program to encourage the construction of centralized cooking-facilities for schools (centralized meal-centers). Registered Dietitians oversee the menus for these facilities. Further many municipalities are considering the cost benefits of entrusting the provision of meals to private foodservice companies. Dietitians are employed as public staff in charge of school lunch planning and preparation for these businesses. A system to provide teachers of nutrition for schools has recently been established. The major aims of school lunches are: "To enhance school life, encourage sociability, rationalize eating habits, improve nutrition conditions and so to promote health, and to help people have a correct understanding of the production, distribution, and consumption of food". School Registered Dieticians are also responsible for communication with parents about the menu schedule and provide guidance (through newsletters etc.) on nutrition for students and families.

3) Foodservice at Factories and Commercial Establishments.

Provision of meals at factories and businesses is said to have originated at the Tomioka Silk-reeling Factory, Gunma Prefecture, in 1872. The company hired graduates from dietetic schools for the factory in 1926 to improve nutrition for its workers, many of whom lived in company dormitories. The "Factory Law" was revised in the same year to limit the maximum working hours of workers younger than 10 years old and female workers to 11 hours and to prohibit their working at night. Kawaguchi City in 1934, under the guidance of the Nutrition Research Laboratory established a foodservice union that distributed meals and food supplies. Municipal government offices also promoted and through their dietitians the nutrition of factory-provided meals. In 1937 after the war between Japan and China had commenced, municipal governments began to directly manage foodservices at munitions factories. The training of dietitians for industrial foodservice was started in 1940 with the support of the Labor Bureau and the Ministry of Health and Welfare as part of the war effort and universal mobilization. Since the postwar period of poverty and dislocation, Japanese expect large companies (and many medium and small organization too) to be engaged in the welfare of their workers. Industry support of employee health and nutrition was funded by a rapidly growing economy through the 1990's.

Most factories and other business establishments promoted the development of in-house foodservice facilities or supervised and subsidized subcontracted services. In the immediate postwar period, the first priorities were to secure and increase nutrients, but Japanese today are suffering from excessive calorie intake and unbalanced diets far too abundant in animal fats and protein. Now municipal governments and public health offices working with corporate dietitian services have instituted measures and education about balanced diets and nutrition. Greater attention should be given in the future to provision of balanced meals at factories and other establishments, to improving their access and utilization by individuals and to raising the quality of foods and presentation. Factory, corporate and institutional foodservices through their supervising dietitians also have a continuing role to play in education about nutrition and proper eating habits.

4) Dietitian Supervision of Meals at Child Welfare Facilities and Social Welfare Facilities.

(1) Residential Childcare Facilities (orphanages, homes for children of troubled families, juvenile delinquent institutions) and (much greater in number) Daycare Centers

Registered Dietitians are often on the staff of residential institutions. Day nurseries or daycare centers are facilities mainly municipal and some private that care for healthy children at the request of parents who because of work or other reasons cannot tend them full-time. Because of the recent increase in mothers working outside the house, the necessity of daycare is increasing and nursing hours are being extended. As infants and toddler are in their most critical stages of growth, public health service dietitians attempt to ensure either in-house or through visits that daycare centers provide appropriate amounts of essential nutrients to promote children's health as well as helping children from babyhood to form desirable eating habits, understand balanced diets, and improve their table manners and good sanitary habits through eating with their groups.

(2) Social Welfare Facilities (principally municipal residential, but increasingly community run daycare and short term, facilities for the disabled and senile elderly).

Elderly people should spend their remaining years in comfort. Providing nutritious meals prepared in ways that are appropriate and enjoyable by the aged at varied stages of handicap plays a very important role in maintaining health. The best facilities provide their elderly patients with warm home-style meals. Meals for the elderly were first provided in 1872 at the Tokyo Workhouse and the Osaka Home for the Aged. Today, municipal government as well as NPO's and for-profit business enterprises such as day care with meals, short stay, residential care, as well as various designated nursing homes and hospitals provide various services for the elderly. Many dietitians now work at these organizations and facilities, resulting in significant changes and improvement in the ways meals are provided.

5) Dietitian's Roles in Foodservice for the Self-Defense Forces and Merchant Marine.

Foodservice for the Self-Defense Forces aims to contribute to the health of those in uniform as well as the important objective of developing their physical strength and stamina through better nutrition. The Self-Defense Forces began as a police reserve force in 1950, and the foodservice was initially contracted to a service company. At present, however, each unit directly manages meal service. With regard to the foodservice for ships, dietitians are sometimes posted aboard ships to help maintain the health of the crew during long voyages.

6) Dietitians at Hospitals: Nutrition Consultation

and Food services at Hospitals.

The hospital foodservice system began with the dietary managed hospital foodservice at the hospital attached to Keio University in 1920. Keio University Hospital was the first to undertake studies on nutrition of its patients in Japan. A Laboratory of Dietary Therapy was founded at Keio's School of Medicine in 1924, and the Department of Dietary Therapy was founded at the affiliated hospital in 1933 to study dietary therapy. Prof. Kenta Ohmori of the School of Medicine became the head of the laboratory and Dr. Minoru Hara of the National Nutrition Research Institute was named chief researcher. They directed important research and study and trained many dietitian researchers and hospital administrators in hospital foodservices. Many researchers at the laboratory were graduates from Japan Women's University. In 1947 American Occupation Authorities who issued the "Notification of the Spread of the Hospital Food service System" recognized the importance of hospital foodservices. The following year, as part of the enactment of the wide-ranging "Medical Treatment Law" an official hospital foodservice approval system was adopted that included posting dietitians to national hospitals and improving equipment. In 1958 the term hospital foodservice was changed to "Standard foodservice". Standards of nutrition were set and standardized foodservice facilities staffed by dietitians became compulsory. Thus, hospital foodservice was provided as part of government mandated medical treatment. In 1961, the National Health Insurance point system was revised to include payment for special meals prescribed for individual patients by physicians prepared by hospital foodservices. In 1978 the system changed to include 30 points for patient/family education or guidance in nutrition. In 1990 standards for contracting foodservices to outside foodservice companies were implemented. In an attempt to improve what were widely recognized as deficiencies in inpatient meals the National Health Insurance began a system of compensation points for special dietary management to insure the timely offering of meals at a suitable temperature based on certain nutrition standards. In 1993, the guidance charge for nutritious meals was raised to 100 points, and it became obligatory for trained dietitians rather than others to give this guidance. The "standard meal" system was abolished by a partial revision of the "Health Insurance Law" in 1994. For the first time the insurance system provided for dietary therapy at the time of hospitalization through meals paid for separately from medical expenses. The system was renamed "meal reimbursement for dietary therapy at the time of hospitalization", and because of varying individual patient needs and rising costs the patient for the first time had to bear a certain amount of the costs. At the same time the insurance system increased points added for special nutrition management, and the implementation of additional National Health Insurance compensation points for institutional canteens and selective menus as well as "meals based on special menu needs" were approved. Moreover dietitian guidance to outpatients, guidance on nutritious meals supplied to inpatients, and guidance on nutritious meals supplied by home-helpers now could be compensated more completely through the National Health Insurance system. The law mandates that Registered Dietitians should provide such meal supervision and guidance.

Thus, as this overview shows, the responsibilities and roles of Japanese dietitians have gradually increased along with the requirements for certification (as Registered Dietitians) under government-mandated laws. The most recent legal changes in the March 2000 amendments to the "Law Regulating Dietitians" are particularly far-reaching. Next I would like to consider the new responsibilities and status of Japanese

dietitians.

3. New Roles of Dietitians in the 21st Century

1) Dietitian' s Role in Nutrition Therapy at Hospitals.

Japanese hospital dietitians are closely involved in the process of food-preparation, food-service management, and nutriment supplementation for patients. Most of Registered Dietitian's work is still performed without knowledge of the actual nutritive conditions of individual patients. The nutrition status and special dietary needs are not evaluated (i.e. through interviews, blood tests etc.) nor recorded by dietitians. Most physicians, excluding those who are interested in nutrition, do not assess or follow closely nutritional needs of patients. However the introduction of Nutrition Therapy in recent years has accompanied the greater understanding of clinical dietetics and new techniques and forms of supplement nutrients and requires much closer nutrition control. Nutrition Therapy relies on medicines and nutritive chemical supplements sometimes to the exclusion of daily food, and these are administered not only orally but also intraperitoneally or intravenously. Nutrition Therapy produces significant effects and may cause unfavorable side effects. Diagnosing and treating the changing nutrition status of the patient has become an important adjunct to standard medical diagnosis and treatment. Registered Dietitians should play a central role in nutrition assessment and determination of nutritive status and treatment. In Europe and United States, in addition to being in charge of foodservices and inpatient meals, Clinical Dietitians (CD) take an active part in Nutrition Therapy, conduct nutrition assessments of patients often in critical condition, and work out nutrition control plans not only for inpatients but throughout the recovery or ongoing care periods. In the United States, the concepts and training for Nutrition Support Team (NST) and Nutrition Support Service (NSS) are clearly defined. A team consisting of physicians, CDs, pharmacists, and nurses performs nutrition assessment, and supplementation, as well as patient and family education. Such a team approach improves the effects of overall medical treatment and of course the quality of life for patients. Safe and cost efficient nutrition control is required. Team treatment has not come extensively to Japan as yet. First we must train physicians and medical administrators on the roles and importance of clinical Registered Dietitians. The year 2000 revision of the "Law Regulating Dietitians" seeks to clarify the orientation of hospital dietitians towards these goals of team care and Nutrition Therapy.

2) Dietitian's Role in Measures for the Aged.

In Japan, surveys show that the aged account for 20% of the population in need of weight reduction or diet guidance to reduce excessive intake of calories or unbalanced intake of certain nutrients like saturated fats or sodium. On the other hand, the aged account for 20% of those whose diet and caloric intake is inadequate. The needs of the guidance in eating habits and nutrition will be increased for the aged population. Many older Japanese live alone or live only with a spouse rather than in the traditional extended family. In particular, the government and health care system must seek quick relief measures for the aged who are bed-ridden, suffer from senility, or live alone and so suffer from poor nutrition. The government health insurance system and regional community welfare offices are working to improve care facilities for the aged and also to help comparatively independent older persons spend healthy and comfortable lives at home in their communities with the provision of home-care service. Care service must be coordinated through a team of specialists to meet

indivi[illegible]lized needs of the aged who live in variou[illegible]situations. The team approach is needed for m[illegible]a services delivered to homes. Elderly perso[illegible]living alone or with only a spouse in subst[illegible]d older housing with poor kitchen facili[illegible]s especially need practical guidance about r[illegible]enus and cooking. Because cooking meth[illegible]s such as frying and steaming raise the risks [illegible]ccidents when undertaken by the aged, they [illegible]a dietitian's guidance in the use of proce[illegible]l or precooked foods. Current dietary recom[illegible]ndations are based on calories needed by h[illegible]lhy and active older persons. But for older i[illegible]dividuals who are less active or debilit[illegible]d, the excessive supply of calories in home-[illegible]ivered meals or standard packaging leads [illegible]an increase of leftover food, waste of energy [illegible]nd unbalanced diets with insufficient intak[illegible]f needed nutrients. Meals must be tailor[illegible]o the individual needs of older persons. Conv[illegible]onal meal guidance provided by dietit[illegible]n has tended to overemphasize the intake of r[illegible]ssary nutrients. Although priority must still [illegible]given to adequate nutrition, dietitians must i[illegible]creasingly take into account the psych[illegible]gical and social aspects of meals, such as th[illegible]role of meals in improving mental stabili[illegible]y social contact and communication. Dietiti[illegible]s must seek to enhance food culture and eating[illegible]abits. Meals for the aged play an indisp[illegible]sable role in the quality of life. Incre[illegible]gly, Registered Dietitians should inves[illegible]te and evaluate the life styles of patients (espe[illegible]ly the elderly) and their families in order [illegible]provide useful nutritional guidance and suppo[illegible]. The current level of the dietitian's knowl[illegible]ge about nutrition and food preparation as we[illegible]as her skills in evaluation and education[illegible]mmunication must be raised to fulfill the R[illegible]stered Dietitian's new roles to provide evalu[illegible]n and comprehensive guidance as part of a h[illegible]th team.

Conclusions

Oral intake of food --eating-- is the most natural and simplest method of taking in nutrients and it is important to satisfy the basic desire of humans to "taste and enjoy food". Japanese professionals engaged in health care have so far been thinking too little of the pleasure of eating and the psychological and social significance of eating habits for recovery, health, or sense of well being. Emphasis has been placed almost exclusively on the nutrition values of food and supplements. Eating can enhance one's peace of mind and desire to live. At the same time, food, meals, and eating provide an irreplaceable basis for communication and promote ties of family and friendship that are indispensable to the quality of life whatever one's health status. People in all but the most compromised health situations continue to pursue the pleasure of eating and deliciousness of food. This is a privilege granted to human beings, a right not given to other animals. In the clinical setting (both residential and outpatient) the smallest consideration related to nutrition and its delivery can have a large impact on the individual. Food issues can influence many aspects of patient cooperation as well as the outcome of overall medical treatment. Therefore the cultural aspects of eating, including the history of foods, regional and life-stage variations in preferences and meal preparation, and appropriate knowledge and educational methods to communicate healthy eating habits must be incorporated into the training of Registered Dietitians, along with new methods of nutrition therapy and geriatric care.

In this article, two major areas relating to revision in the "Law Regulating Dietitians" have been discussed in connection with the roles of Registered Dietitians in the 21st Century. Our department (with the university as a whole) works in close cooperation with Niigata Rehabilitation Hospital (as our main setting for

practical training of students) as well as with several facilities for the aged that are officially designated as university related facilities. Our university aims to train specialists able to deliver a new style of medical treatment through the clinical team approach. Ideally, students can access to education and research throughout the five departments. We hope that students in our department, thanks to our educational principles and a curriculum in line with the recent amendments to the "Law Regulating Dietitians", will receive an education most suitable for dietitians in the Twenty-first Century. We expect our graduates to work in the community as capable dietitians with a human touch.

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