Opinion

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Development of Primary Care Based Health Support Model in Japan
–From Preventive Disease Management to Home Care Supporting System–

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Abstract

Japan faces to the rapid ageing. This ageing process accompanies with the increase of patients with chronic diseases. Under the highly aged society where most of the aged patients have multiple health and social problems, an integrated service delivery system is required. Primary care has long been regarded as indispensable in order to realize such an appropriate health service delivery system. The new Japanese health promotion program that has been implemented since 2008, offers an important opportunity for the development of primary care based chronic disease management (CDM) scheme, as this program requires for different service providers to work together. The electronic health record (EHR) that is used for the new health promotion program can be developed for the regional common EHR in future. Unfortunately, the new health promotion program has not been expanded as expected at the moment. The market seems to be rapidly shrinking. Considering the importance of establishing the primary care system for future highly aged society, the local medical association that is the key organization of primary care, is expected to actively participate the implementation of new health promotion program and then to establish a primary care based CDM system.

Key words: chronic disease management, primary care, electronic health record, community health

❖Introduction

Japan faces to the rapid ageing. This ageing process accompanies with the increase of patients with chronic diseases. Today the lifestyle related disease such as hypertension, dyslipidemia, hyperglycemie, and cancers, counts for two thirds of deaths and a theird of medical expenditures in Japan (Figure 1)[1].

Behind this rapid increase in the medical expenditures, there is a change of lifestyle pattern. According to the results of National Health and Nutrition Survey, the Japanese becomes sedentary year by year and thus the over-nutrition related disorders, such as diabetes mellitus have become new threats for the Japanese health condition (Figures 2 and 3)[2].

In order to ameliorate this situation, the Ministry of Health, Labour and Welfare (MHLW) launched the health care reform program in 2006. According to this reform, a nation-wide health promotion program has been introduced since April, 2008[3]. As a main program of health promotion, the disease management program has been introduced. All public health insurers have to organize health check-up and the following health promotion programs for the insured over 40 yr old. The main target of screening is "Metabolic syndrome" that is regarded as major risk factor of chronic diseases such as diabetes and hypertension. This dis-

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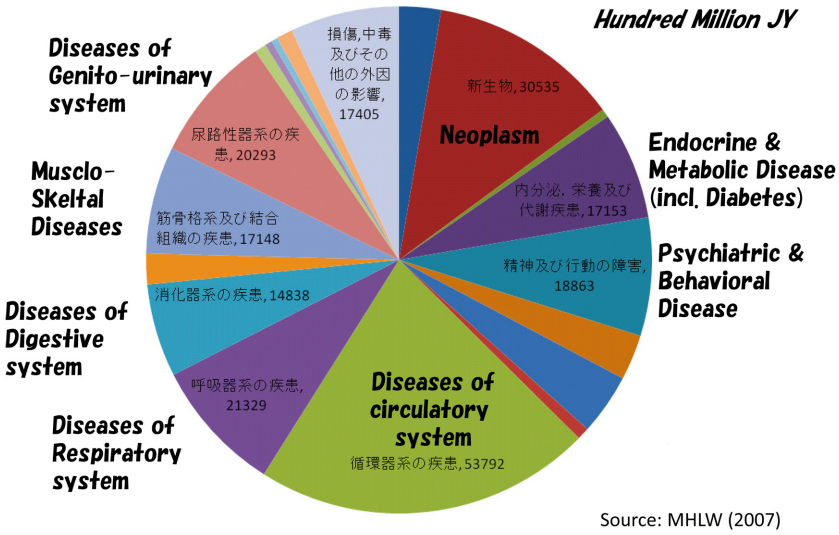
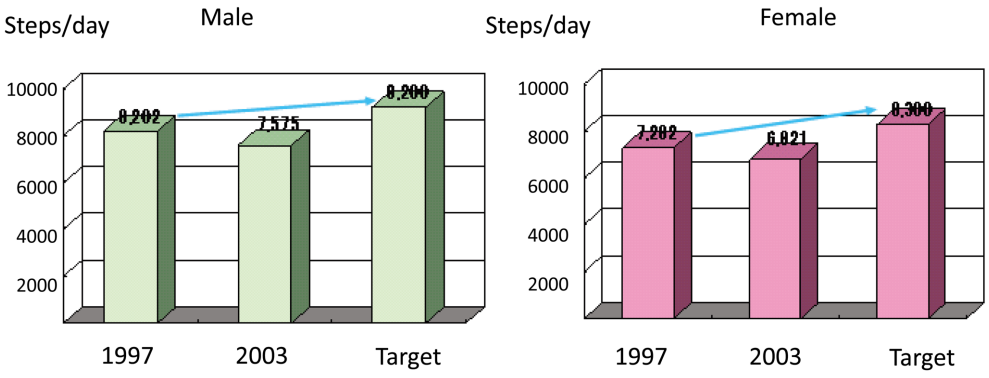


Figure 1 Health expenditure by disease category (2005: Total = 33,000,000 M JY).



Healthy Japan 21 sets the target for each life-style related behavior

Source: National Health and Nutrition Survey (2003)

Figure 2 The Japanese are becoming “sedentary”.

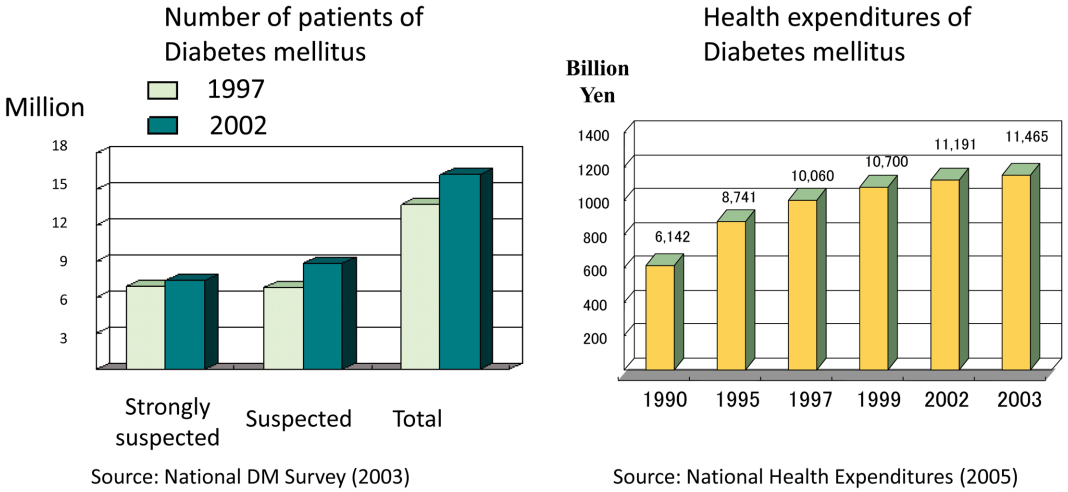


Figure 3 Diabetes as a new threat for the Japanese.

ease management program has been designed mainly focusing to the prevention.

However, this health promotion program has not been working well at the moment. The complexity of system and lack of social marketing viewpoint are considered as two major reasons of current difficulty[4]. Another important problem of current health promotion program is the insufficient consideration of linkage with primary care. Although enormous efforts are made for the disease prevention, most of the persons will develop some kinds of chronic diseases along with the ageing process. Therefore, it is very important to construct a primary care based integrated system that combines prevention and treatment.

Primary care as a key success factor for active aged society

According to the definition of American Academy of Family Physicians, primary care is defined as follows[5];

1) Primary care includes health promotion, disease prevention, health maintenance, counseling, patient education, diagnosis and treatment of acute and chronic illness in a variety of health care settings (e.g., office, inpatient, critical care, long-term care, home care, day care, etc). Primary care model is performed and managed by a personal physician often collaborating with other health professionals, and utilizing consultation or referral as appropriate.
2) Primary care provides patient advocacy in the health care system to accomplish cost-effective care by coordination of health care services. Primary care promotes effective communication with patients and encourages the role of patient as a partner in health care.

Primary care has long been regarded as indispensible in order to realize an appropriate health service delivery system under the highly aged society where most of the aged patients require an integrated service. However, it has long been difficult to be introduced especially in the developed society. One of the reasons may be the intrinsic problem of medical education that puts much emphasis on specialty oriented clinical training not on primary care. Several Japanese medical institutions including university hospitals have established the special division for the training of primary physicians, but most of them are suffering for shortage of candidates.

Historically, despite the intrinsic problem of medical education, most of the clinic based physicians function as "primary care doctors" in Japan. During the medical school based rotating on the job training (OJT) system, most of the Japanese physicians, especially those of internal medicine and surgery master the skill as general practitioner in addition to their original specialty. Usually after the 10 to 20 yr of experiences as hospitalists, they open their own private clinic. This is a common career making for most of the Japanese physicians.

Because of historical and cultural reasons, most of the Japanese private physicians work as solo practitioners. This situation makes it difficult to construct a primary care network. In order to respond multiple health problems of the frail aged, it is very important to develop a network of the first line health professionals, such as primary care physicians, community nurses, community therapists, pharmacists at drug stores, social workers and other care workers.

The introduction of Long Term Care Insurance has opened an opportunity where primary care physicians, care managers and other care workers share information of their clients. This made it possible to network the ADL care and medical care, although it is not sufficient at the moment.

In this line of consideration, we consider the introduction of new health promotion program as an important opportunity to construct the primary care network in Japan, in which primary care physician and other community health workers collaborate for health promotion and chronic disease management. For this purpose, we have established the "local medical association" model as shown in this Figure 4[6].

Under this model, a local government, that is the insurer of National Health Insurance (NHI), makes a contract with local medical association for the operation of new health promotion program. A NHI insured receives health check up at the member physician's office. According to the results of health check up, the NHI insured receives the health education programs by physicians or other health professionals who received an order sheet from the physician.

In order to support the management, we have developed an IT based supporting system, so called U-HMS as shown in Figure 5. This system is an Application Service Provider (ASP) service that functions as a common patient record. Using this system, user can monitor their clients and create an e-claim for

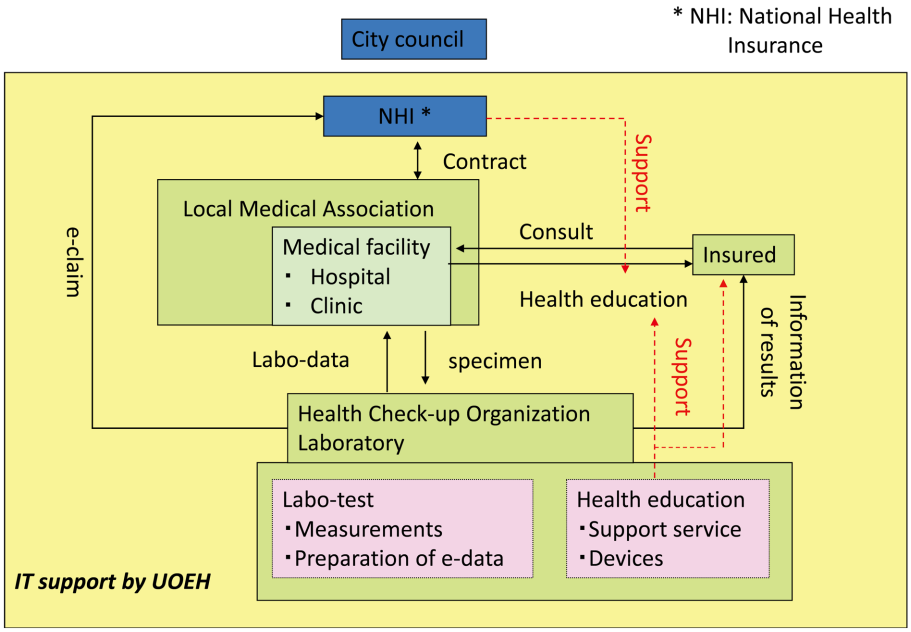


Figure 4 Primary care model.

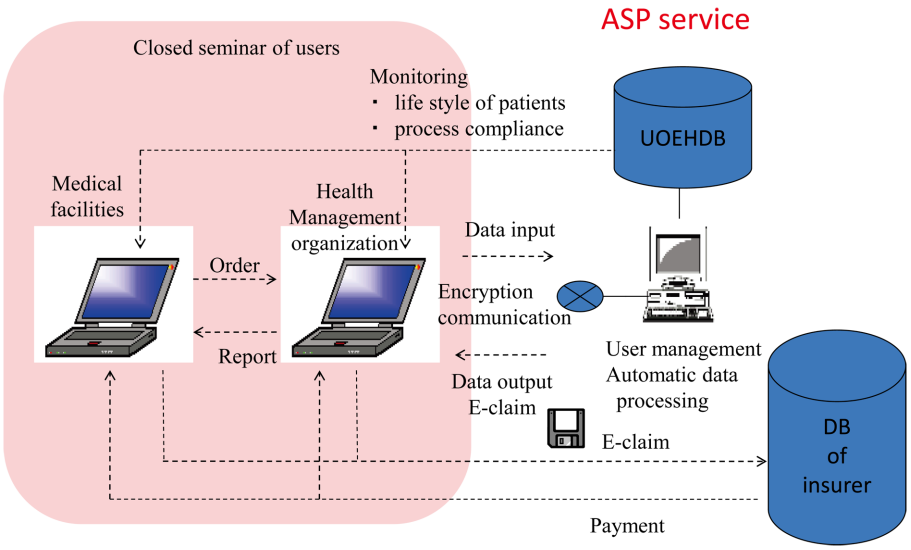


Figure 5 UOEH health management system (U-HMS).

reimbursement.

As Figure 5 shows, our system networks different types of health professionals in the community. For example, a public health nurse working for the visiting nursing service station or the dietitian working for the drug store provide the health education services according to the prescription of primary care physician using our U-HMS model.

This system is now successfully used by members of the Kumamoto City Medical Association.

Development of primary care based home care supporting system using the U-HMS scheme —a new application of U-HMS—

It is estimated that there will be 1.6 millions of deaths per year in 2035. As Anezaki indicated, today about 80% of the Japanese die in various types of institutions, such as long ward care hospitals and nursing homes[7]. It is clear that we cannot afford to prepare enough volume of institutional services for this huge number of dying persons. Therefore we have to

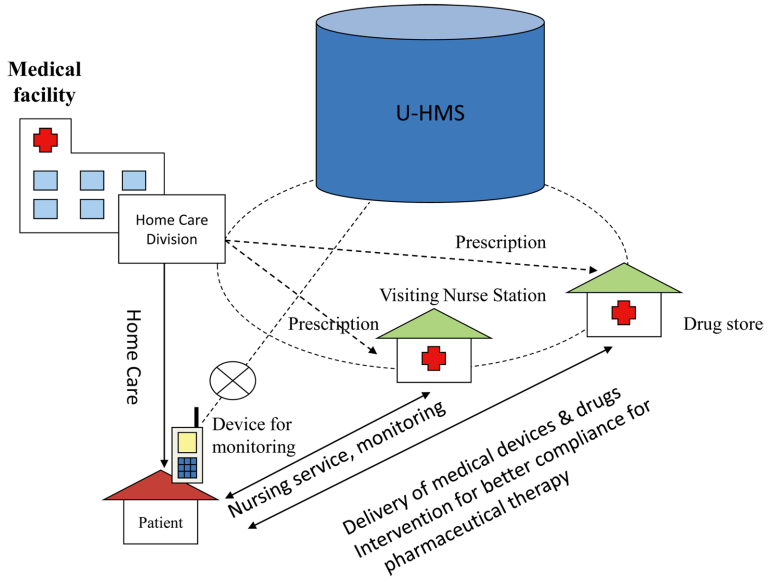


Figure 6 Home care support system based on the U-HMS.

develop a new system of home care that makes it possible for the terminal stage patients to stay at home as long as possible. Considering the condition that the frail aged has multiple health and social problems, the new system must be organized based on the primary care model. For example, the authors consider that the British Primary Care Trust is one of the ideal and feasible models for Japan. However, as most of the Japanese primary care physicians are solo practitioners, it is indispensible to make them to work or to collaborate together. This network must integrate in-patient services, out-patient services and the co-medical and social services provided by nurses, therapists, and social workers who are working for different organizations. This situation requires an IT based regional common patient record. At the same time, it is necessary to develop other IT devices for monitoring of the patient at home.

In order to implement a common regional EHR, it is indispensible to use a standard data format for recording. Unfortunately, as a number of EHR systems of different data format have been introduced into the Japanese health market, it has been very difficult to directly connect the EHR of different health institutions even in the same region. Recently, a new information technology called ID Links[8] has been developed and used at the Nagasaki area and Hakodate area in Japan. This system is very unique one that makes it possible for an organization to access the contents of EHR of other organizations using a special electronic key for mutual approval. In Nagasaki area, using this electronic network, primary care physicians and hospital based specialists work together in order to support the terminal stage of patients at home. If this system is possible to integrate the ADL care under the LTCI and new health promotion program, it can be developed as an infrastructure for the integrated health care system.

Another possibility is to newly construct a common EHR that can be used by the various health professionals in the community. Considering the economic limitation that most of the Japanese health institutions have, it will be reasonable to construct a common EHR based on the already existed system. Fortunately the new health promotion program introduced in 2008 has opened a possibility to create such an EHR. For example, our U-HMS can be developed as the community common EHR. We are now developing such a system as shown in Figure 6. It is very important to recognize that this system must be based on the primary care. A desirable system is that is used by the local medical association to which the primary care physicians belong. Even though the new health promotion program succeeds to control the body weight of high risk individuals, finally most of them will develop some life style related diseases. This situation requires a medical treatment. In order to offer appropriate treatment with continuity, it is necessary to organize an integrated service delivery system which covers from the primary prevention to treat-

ment and tertiary prevention. The local medical association model offers each physician's office a new function to assure the continuity of care. In this way we will be able to bridge the two disease management programs: one for high risk "healthy person" and the other for chronic diseases patient. This continuity and integrality are very important to the chronic disease management. The author believe that the newly introduced health promotion program in 2008 is a very important opportunity to develop an effective primary care based health system in Japan. It is very expected that local medical associations will utilize this opportunity in order to construct a desirable health care system for the highly aged society.

❖Conclusion

The Japanese health promotion program has been introduced in 2008, but actually this program is not working well. The problem of current health promotion program is the insufficient consideration of linkage with primary care. Even though the new health promotion program succeeds to control the body weight of high risk individuals, finally most of them will develop some life style related diseases. In order to offer appropriate services, it is necessary to organize an integrated service delivery system which covers from the primary prevention to treatment and tertiary prevention. The new health promotion system must be organized under the concept of primary care.

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