Review

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Hospitalization at Home as a Framework for Development of Home Care

—An Alternative of In-patient Care for the Ageing Society—

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Abstract

According to the 2006 Health Care Reform Plan, the Japanese government intends to further develop the home care. The reform plan requires for each prefecture government to reduce the number of long-term care beds by transforming these facilities into a new type of "home for the aged", such as assisted livings and nursing homes in order to promote alternatives of in-patient care. Many countries are trying to develop alternatives to in-patient care because of increasing health care costs, pressure on acute hospital beds and increasing concern about quality of life. Developments in medical technology, improvement in housing and an increasing emphasis on primary care have all encouraged innovations that reduce reliance on in-patient care. One of such alternatives of in-patient care is Hospitalization at Home care (HAHC). The HAHC provides health care for the patients who would otherwise require hospital stay. In this article, the author will discuss the possibility to develop the Japanese style HAHC based on the comparative analysis of HAHC of France and UK.

Key words: home care, hospitalization at home care, integrated care, Japan

❖ Introduction

After the establishment of 2006 Health Care Reform Plan, the reorganization of health care delivery system is on going in Japan. The Plan intends to further develop home care. The reform plan requires for each prefecture government to establish the medical expenditures rationalizing plan and the community health care plan. In these plans, the central government has clarified its will to reduce the number of long-term care beds by transforming these beds into a new type of "home for the aged", such as assisted livings and nursing homes in order to promote home care. However, if the government wants to make the "home for the aged" as a real alternative of long-term care beds, they have to pay more attention to the required health services in such facilities; especially how to prepare enough volume of quality nursing care services.

As shown in Table 1, one of the characteristics of Japanese health system is its in-patient services dominant pattern. This is a historical product of poor social service system for the aged after the Second World War. As the government did not have enough budgets to organize the hospital services just after the War, they have depended on the private sector for construction of hospitals. The government prepared various financial incentives for the private sector, i.e., tax exemption and loan with very low interest. The introduction of universal coverage of medical insurance in 1961 made it possible for medical facilities to secure the income. Under this favorable climate, the number of hospital beds increased from 686,743 to 1,676,803

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Table 1 Chronogical cahnges in number of Medical Care Facilities stratified by establisher

Facilities	1960		1970		1980	
Total	6,094	100.0%	7,973	100.0%	9,055	100.0%
Public	2,077	34.1%	1,991	25.0%	1,962	21.7%
National	452	7.4%	445	5.6%	453	5.0%
Public organization	1,425	23.4%	1,382	17.3%	1,369	15.1%
Social Insurance Fund	200	3.3%	164	2.1%	140	1.5%
Private	4,017	65.9%	5,982	75.0%	7,093	78.3%
Medical Judicial Persons	1,316	21.6%	2,089	26.2%	2,896	32.0%
Individuals	1,947	31.9%	3,164	39.7%	3,433	37.9%
Others	754	12.4%	729	9.1%	764	8.4%
Beds						
Total	686,743	100.0%	1,062,083	100.0%	1,319,406	100.0%
Public	398,017	58.0%	483,046	45.5%	519,150	39.3%
National	146,284	21.3%	156,432	14.7%	166,620	12.6%
Public organization	218,295	31.8%	287,721	27.1%	315,905	23.9%
Social Insurance Fund	33,438	4.9%	38,893	3.7%	36,625	2.8%
Private	288,726	42.0%	579,037	54.5%	800,256	60.7%
Medical Judicial Persons	98,202	14.3%	246,680	23.2%	397,992	30.2%
Individuals	90,333	13.2%	195,741	18.4%	233,591	17.7%
Others	100,191	14.6%	136,616	12.9%	168,673	12.8%

Facilities	1990		2000		2005	
Total	10,096	100.0%	9,266	100.0%	9,026	100.0%
Public	1,906	18.9%	1,863	20.1%	1,785	19.8%
National	399	4.0%	359	3.9%	294	3.3%
Public organization	1,371	13.6%	1,373	14.8%	1,362	15.1%
Social Insurance Fund	136	1.3%	131	1.4%	129	1.4%
Private	8,190	81.1%	7,403	79.9%	7,241	80.2%
Medical Judicial Persons	4,245	42.0%	5,387	58.1%	5,695	63.1%
Individuals	3,081	30.5%	1,173	12.7%	677	7.5%
Others	864	8.6%	843	9.1%	869	9.6%
Beds						
Total	1,676,803	100.0%	1,647,253	100.0%	1,631,473	100.0%
Public	546,052	32.6%	539,271	32.7%	514,074	31.5%
National	158,746	9.5%	144,649	8.8%	125,295	7.7%
Public organization	348,226	20.8%	356,100	21.6%	351,254	21.5%
Social Insurance Fund	39,080	2.3%	38,522	2.3%	37,525	2.3%
Private	1,130,751	67.4%	1,107,982	67.3%	1,117,399	68.5%
Medical Judicial Persons	656,348	39.1%	795,089	48.3%	839,354	51.4%
Individuals	263,304	15.7%	101,620	6.2%	61,842	3.8%
Others	211,099	12.6%	211,273	12.8%	216,203	13.3%

Source: Survey on medical institutions (MHLW; corresponding year).

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between 1960 and 1990. On the contrary, the government has made less effort to develop social services for the frail aged, such as development of nursing home, assisted living and home help services. Furthermore, these services were not preferred by the users because one must receive a means test before using.

Meanwhile, the pressure for institutional services increased in rural areas because of rapid ageing due to the large scale internal emigration to urban areas. In those days some left-wing local governments such as Tokyo and Kyoto introduced the free-of-charge medical services for the aged. With the rapid economic growth in 1960s, it was not so difficult to maintain this very generous program. The national ruling party of those days, the Democratic Liberal Party, considered that the popularity of left-wing local government was problematic and finally decided to generalize the free medical services for the aged in 1973. As it was not necessary to receive a means test for hospitalization, this program was enthusiastically welcomed by the aged and their family. As a result, many frail aged peoples have been hospitalized in medical facilities not in social facilities, such as nursing homes and assisted living nor receiving the home care services at their residence, even though they do not require in-hospital medical services.

Just after the introduction of free medical services for the aged, Japan was hit by the Oil shocks in 1973 and 1975 that heavily aggravated the social security finance. Finally the government abandoned the free medical services for the aged in 1983, but the hospitalization of aged was too much spread out around entire Japan to rationalize it. In this way the health and social services for the frail aged have become too much medicalized and institutionalized.

This is the most important reason for the introduction of the Long Term Care Insurance in 2000. Main objectives of LTCI are the de-medicalization and de-institutionalization of care for the frail aged. In 2000, 600,000 aged were institutionalized, and 1,240,000 aged received home-based ADL care services on monthly basis[1]. On monetary base, these figures correspond to 194.0 billion yen (1.94 billion USD; 100 yen = 1 USD) to institutional care and 99.6 billion yen (1.00 billion USD) to home-based care in each month. Six years later, in 2006, the monthly average number of aged persons who received institutional care and home-based care increased up to 810,000 and 2,570,000, respectively. On monetary base, these figures correspond to 206.3 billion yen (2.06 billion USD; 100 yen = 1 USD) to institutional care and 228.9 billion yen (2.29 billion USD) to home-based care. Even though the home care has been much advanced, the government considers there is still a room for promotion of home care.

However, if the government wants to promote the home care for the aged as an alternative of institutional care, they have to increase the volume of visiting nursing services. It is the nursing service that plays a pivotal role in the long term care wards. Among the countries where home care is very advanced, the home based nursing services are key services in order to promote quality home care. In this article the authors describes the actual situation of home care system in France and United Kingdom that are vary famous for hospitalization at home system. Based on the situation analysis of these two countries, the author will discuss on a possibility to introduce is as an alternative for the future Japanese health care system for the aged.

❖ Hospitalization at Home

Many countries are trying to develop alternatives to in-patient care because of increasing health care costs, pressure on acute hospital beds and increasing concern about quality of life. Developments in medical technology, improvement in housing and an increasing emphasis on primary care have all encouraged innovations that reduce reliance on impatient care[2, 3]. One of such alternatives of in-patient care is Hospitalization at Home care (HAHC). The HAHC provides health care for the patients who would otherwise require hospital stay[4]. HAHC has been developed in the occidental countries, especially in France and UK. However, the contents of services differ among the countries. There is no internationally accepted definition of HAHC, thus there are several types of HAHC.

French experience

The first HAHC was introduced in France according to the 1970 Hospital Law. Originally this service was designed for cancer patients. Most of the cancer patients who have finished acute care, i.e., surgery, often need the following adjuvant therapy such as chemo-therapy and parenteral nutrition therapy. These cares do not always require to be offered in hos-

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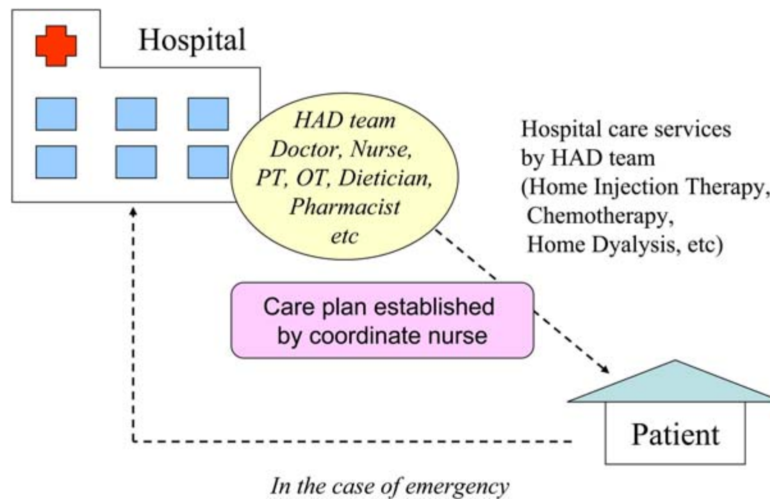

Figure 1. Hospitalization at Home Care (HAHC) in France (Hospitalization à Domicile: HAD)

pital. The French HAHC has introduced in order to provide such post-acute care at patient's residence. Since then the coverage area of HAHC has been gradually expanded to other disciplines, such as palliative care, home dialysis, home injection therapy.

All public acute-care hospitals must have their HAHC division (Figure 1)[5]. With the prescription by physician, the coordinate nurse of HAHC division establishes the care plan for patient. According to this care plan, patients receive daily nurse visits, periodical consultation by hospital physician and other co-medical services until their status become stable by the predefined criteria.

Another point to be mentioned in the French system is the existence of private nurse practitioner. The private nurse practitioner is an independent health practitioner who owns one's own office. They provide various kinds of nursing services at patient's home and/or nursing home by the prescription of doctors. They play a very flexible function in home care and often bridge the institutional and home based care services. Their function is very interesting and suggestive in order to re-consider the future of visiting nursing service in Japan.

UK experience

Under the influence of French experiences, UK introduced the HAHC in late 1970s. In those days, the UK NHS was suffering from the shortage of hospital beds because of the tight financial limitation. The long waiting list was a big problem and criticized by citizens. Most of the patients on the waiting list were old patients. They needed in-hospital service. But most of them needed intermediate services, not intensive acute care. In order to treat this type of patient, UK NHS introduced HAHC services. Because of this origin, UK HAHC services provide more integrated services compared with that of other countries. Figure 2 shows a typical system of UK HAHC. As HAHC services are hospital services, Primary Care Trust[Note] buys HAHC services from Trust Hospital or private HAHC service organization such as Primecare[6]. Usually district nurse[Note] is in charge of establishing the care plan for users.

Effectiveness of HAHC

Is HAHC really preferable than the traditional hospital care from the viewpoint of clinical outcome, cost and QOL? A systematic review of 22 randomized, controlled trials of HAHC suggested that patients who received this type of care had outcomes that were similar to those who were treated in the hospital. However, the cost saving effect has not been evident as viewed from the perspective of health care organization. Leff *et al.* have concluded that HAHC may provide a cost-effective alternative to acute hospital care only if the running costs of the local hospitals are relatively high[4].

So far as the effect for QOL is concerning, Hughes *et al.* reported the higher patient satisfaction level among the terminal stage of cancer patients with HAHC compared with the same category patient

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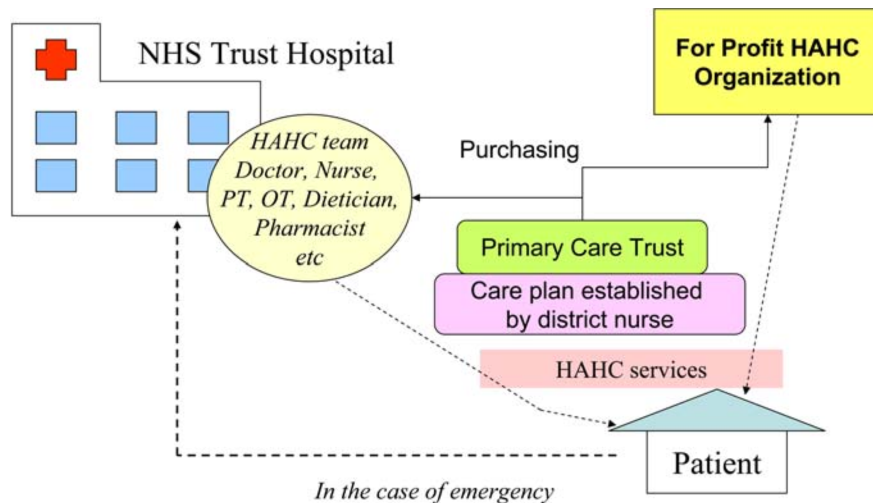

Figure 2. Hospitalization at Home Care (HAHC) in UK

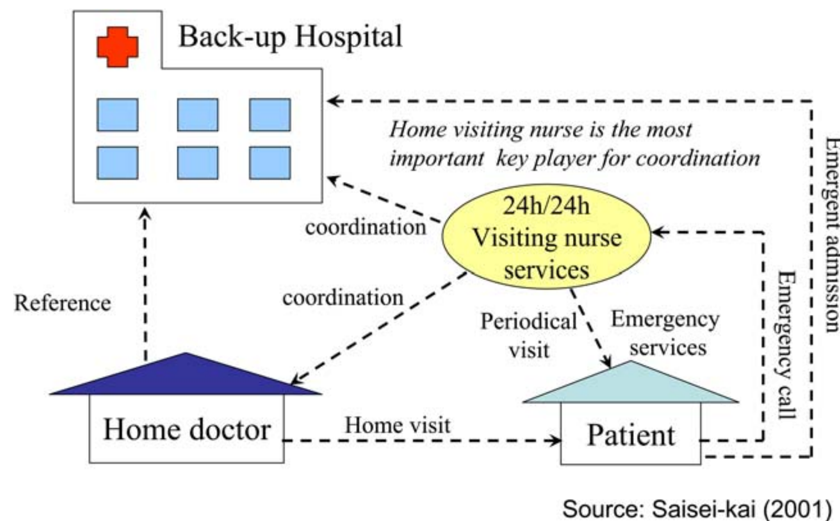

Figure 3. Model case of home palliative care for the aged in Japan

treated in hospital[7]. However, they also reported that a long period HAHC would have a negative effect on the care-giver's mental health[7].

Considering the results of previous literatures, it will be more practical to equip a flexible system that makes it possible for patients and their family to use institutional and extra-muros cares according to the client's condition. This system naturally requires a tool for communications among the different players. The electronic patient record is such a tool. In this meaning, this type of HAHC is very similar to "Medical Home" system[8].

❖ Implication for the Japanese Health Policy

According to the population estimation, there will be 1.7 millions of death per year in 2025 when the ageing of society will reach at its peak in Japan[9]. This situation means the increase of aged patients who have to live their end stages of life at home because of limitation of available institutional services. In order to respond to their requirements, a considerable volume of terminal care services must be offered at home.

According to our previous study on requirements for realization of home based terminal care, there must be three important players as shown in Figure 3[10].

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They are home doctor, 24 h/24 h visiting nursing services and back-up acute care hospital. The entrance of care is home doctor who offers home care and prescribes the visiting nurse services. As most of the Japanese home doctors are solo-practice ones, it is impossible for them to serve for their patients for 24 h/24 h. It is the 24 h/24 h visiting nurse service stations that make the system workable and stable as a key player. The station functions as a triage center in the case of emergency call from patients and/or their family. If the patient is evaluated "urgent", the patient will be directly sent to the back-up hospital. This coordination function gives a large level of sense of security both for home doctors and the patients. This system will be one of the possible basis for developing the Japanese HAHC.

Although the role of visiting nursing service station is very important for the development of quality home care, the actual situation of Japan is very problematic. There were 6,163 stations on 1st April 2007 of which 437 stations (7%) were at stand still[11]. The Japanese Nursing Association has interested in this problem and formulated the proposition requesting the deregulation of staffing criteria. The current criteria require the 2.5 full time nurses for one station and do not permit solo-practice. If the government intends to develop the home care, this criterion must be deregulated.

Considering the rapid ageing of Japanese societies and the recent economic recession, it is absolutely necessary to develop alternatives to in-patient care. If there is enough volume of quality residence for the aged, the hospitalization at home is a very interesting and useful option for the aged society. After the introduction of LTCI in 2000, it might be said that Japan has already introduced the HAHC system. In fact, after the eligibility assessment, the frail elderly can receive the ADL care services including the home nursing services if necessary. A care manager works as a coordinator for the clients.

The problem is that LTCI services are not always well coordinated with medical services. As we have reported, the background diseases of clients of LTCI services users have become very wide-ranged along with the maturation of scheme[12]. For example, the number of patients of terminal stage cancer, chronic obstructive pulmonary diseases and chronic heart diseases has been increasing. In order to offer appropriate integrated services for these categories of patients, it is necessary to equip the coordination function that bridges the medical and LTCI services. For this point, the role of French coordinate nurse is very interesting and suggestive.

If the Japanese government wants to develop the home care, it is absolutely necessary to establish a housing policy that is fit for the coming highly aged society. As our previous study has indicated, the Japanese poor housing policy for the vulnerable groups is one of the most important reasons for overuse of institutional services[13]. In order to ameliorate the quality of life of such aged and at the same time to rationalize the expenditures for medical and ADL care services, the government is required to implement the appropriate housing program for the vulnerable groups. This is a presumption for the development of home care.

Another requirement for the development of advanced home care services like HAHC, is the communication tool among different professionals, i.e., community based common electronic medical recode system. In Japan, there already exist such systems, i.e., the PLANET system[14] and the Wakashio network[15]. Unfortunately, there has been little effort in order to harmonize the already existed systems. It is strongly recommended to make more effort to construct a common platform for the standardization of electronic medical recode system, at least in the same community level.

Note Primary Care Trust

The Primary Care Trust is a type of NHS trust. This organization provides the primary health services and community services, as well as functions as an advocate to buy the secondary hospital services for their clients (registered citizens). A trust usually manages about 20 primary care offices of general practitioner. In order to respond home care needs, the PCT owns nursing team that composes of district nurses for visiting nursing services, school nurses for school health, health visitor for children care, nurses specializing diabetic care, nurses specializing mental health and so on.

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