Globalization of Health Examinations

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1. Introduction

In 1953, health examinations with short hospital stays for healthy people began in Japan. Members of the press called this “Ningen Dock,” as ships return to the docks regularly. Thus the name became widely used. However, at that time, only wealthy people could afford “Ningen Dock” exams. In the U.S., automatic multi-channel blood analyzers became available in the 1960s. Computerized effective one-day health examinations began and became widely used by business people. The American health examination system then spread to Japan, the U.K., Israel and Europe. However, due to a lack of evidence in regard to the effect of health examinations, voluntary examinations went into decline in Western countries. Nevertheless, automated health examinations became standard and widespread throughout Japan. More than 5 million people are receiving general health examinations each year in Japan. Moreover, a type of medical tourism promoted increase in number of people visiting Japan to undergo health examinations. Although views concerning personal health, preventative medicine and medical evidence are different in Western countries versus Japan, we need to disseminate information from Japan regarding the concept of our excellent health examination system globally.

ABSTRACT

Health examinations requiring short hospital stays began in the 1950s in Japan, and automated health checks using automated screening devices and computers began in the 1960s in the United States. Automated health checks have now become standard for general health examinations in Japan. While voluntary health examinations went into decline in Western countries mostly due to a lack of evidence on improving health by health examinations, more than 5 million subjects are receiving health examinations each year in Japan. Moreover, a type of medical tourism promoted increase in number of people visiting Japan to undergo health examinations. Although views concerning personal health, preventative medicine and medical evidence are different in Western countries versus Japan, we need to disseminate information from Japan regarding the concept of our excellent health examination system globally.

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examinations. IHEA has changed its name to International Health Evaluation and Promotion (IHEPA) and categorized the world into three distinct regions: (1) U.S.A. and Canada, (2) Europe and (3) Asia and Australia\(^1\).\(^4\).

3. Decline of Health Examinations in Western Countries

The focus of research funds shifted to cancer research and curative medicine for cardiovascular diseases in the U.S. in the 1970s, and grants for preventative medicine slowly diminished. Even with these cuts, if it could have been proven that the health examinations definitively improved the health of the examination takers, more support would most likely have been provided. Between the 1960s and 1970s, randomized controlled trials (RCTs) were conducted in the U.K. and the United States to compare a group of subjects who underwent health examinations and the other who did not. In London, 7,229 residents from 40 to 64 years old were randomly categorized into two groups: those who were strongly encouraged to undergo biannual health examinations and those who were not; and their health was checked five years later. No significance was found in the number of patients who were hospitalized, number of days missed from work due to sickness, or the death rate between the groups. The examinations for this research were chest x-rays, blood tests, and urine tests. None of these resulted in an early detection of malignant diseases. There was no difference in the rates of smoking and obesity after the examinations between the groups\(^5\). This could mean that conducting simple examinations without appropriate follow-up advice was not useful. In the United States, Collen categorized approximately 5,000 customers from 35 to 54 years old who had insurance with the Kaiser Permanente Group into two groups: those who were strongly encouraged to undergo AMHTS examinations and those who were not. There was no significance in the difference of total death rates between the groups; but the death rates of colorectal cancer and hypertension-related diseases in the examined group were 50%, 36% and 35% (seven years, nine years and 11 years after the examinations respectively) less than those who were not examined. Considering the cost effectiveness of estimated treatment costs, it was also shown that people are generally better off if they undergo health examinations\(^6\). Among all the AMHTS tests given at that time, disease risk reduction was only seen in blood pressure checks and fecal occult blood tests.

Although AMHTS started in the United States, the research funding for the program’s development at Massachusetts General Hospital was stopped; and implementation of AMHTS using Medicare became unavailable. While voluntary health examinations for adults became unavailable in the United States, company-funded health examinations were still being implemented in the U.K. Several health examination institutions in London, such as BUPA Health Centre, implemented AMHTS to their employees. However, implementation of preventative medicine transitioned to community-based healthcare by private practitioners in the 1990s; and health examinations in dedicated institutions slowly declined in the U.K. as well. Similar trends occurred in Israel, Canada and France. No institution currently provides general health examinations similar to the AMHTS in the Western countries. General health examinations for healthy people are unavailable in Western countries; and therefore, research into which types of health examinations are the most useful is not possible\(^1\).

4. Health Examinations in Japan and Other Asian Countries

As mentioned above, “Ningen Dock” exams requiring short hospital stays have been available in Japan since the 1950s; and the establishment of Japan Society of Ningen Dock was earlier than that of IHEPA. After that, the Japan Society of Automated Health Testing was established in 1975 by institutions which provided one-day health examinations, mainly AMHTS. The organization changed its name to Japan Society of Health Evaluation and Promotion. The number of people who undergo voluntary health examinations using the institutions of the two societies is more than 5 million. The IHEPA Conferences were held in Japan in 1976 in Kyoto and 1980, 1994, 2012 and 2016 in Tokyo. In 2000 and 2014, the conferences were held in Taipei, and in Beijing in 2008. Dr. Shigeaki Hinohara was president from 1988 to 2002 and then again from 2006 to 2014, and I took over in 2014. Japan Society of Ningen Dock also established the Ningen Dock International and held its first conference in Okinawa in 2006 and its second conference in Tokyo in 2009. In Taiwan, the MJ Institutions are implementing AMHTS not only in their own country, but also in Beijing, Shanghai, Hong Kong and Singapore.

5. View of Health Examinations in Japan and Western Countries

While no comprehensive voluntary health examinations such as AMHTS for healthy people are no longer available in Western countries, these examinations are actively implemented in Asian countries, mainly Japan and Taiwan. The purpose of health examinations is for the improvement of one’s health, and this improvement is a common desire all over the world. Therefore, the reasons for the difference in attitudes toward health examinations between Japan and Western countries need to be addressed.

In the United States, the selection and implementation of medical activities, including preventative medicine, are decided based on the evidence related to the outcomes of such activities. The U.S. Preventive Services Task Force (USPSTF) was established as a governmental advisory organization to review evidence related to health examinations and publish notices on the usefulness of examinations\(^8\). The result of the randomized controlled trials (RCTs) are used as the main evidence. For example, the prostate-specific antigen (PSA) is widely used as an option for the screening tests in Japan, but USPSTF advised in 2012 not to recommend the use of PSA for prostate cancer screening tests. In order to include PSA screenings on the health examination lists in the U.S., researchers are required to prove that PSA screenings reduce the prostate cancer death rate. RCTs were performed on abnormal PSA cases: one group who had therapeutic interventions after the screenings and the other without any such interven-
tions. USPSTF’s decision was based on the fact that (1) diagnostic prostate biopsy through the rectum caused prostatitis in a small percentage of the abnormal PSA cases and (2) there was no significant difference in the overall death rate, although there was a significant difference in the rate of prostate cancer death between the groups—one who had active treatments, including surgical operations, and the other who only had observations done. There are two types in prostate cancer: one which develops systemic metastasis and active treatment at its early stage could improve the patients’ life prognosis, and the other where the cancer is contained within the prostate gland. Active diagnosis and/or treatment on all abnormal PSA cases may not be recommended until the type of cancer is determined. However, in Japan, if there is a fear that the cancer may be highly malignant, patients and their doctors choose active diagnostic examinations and treatments in most cases if the patients’ PSA values are high. The above examples of PSA show the difference in dealing with medical problems in the U.S. and Japan. For people who undergo voluntary health examinations, the early detection of cancer is more important than whether or not there is evidence of improved health after the examinations.

6. Accepting Visitors from Overseas for Health Examinations

For the management of health examination institutions, it is important to have people undergo voluntary examinations repeatedly; and these institutions have been trying to increase their clients’ satisfaction. For instance, the institutions may try to provide better customer service education for their employees, improve amenities in the institutions and allocate special events like “Ladies’ Day.” Japan Society of Health Evaluation and Promotion and Japan Society of Ningen Dock have their own quality control systems, and they are highly reliable. Therefore, there are some wealthy people who live in countries without this type of health examination system who wish to undergo voluntary health examinations in Japan. The Ministry of Economy, Trade and Industry is planning medical tourism to attract people, mainly from China, Russia and Korea. However, there are some issues which one must deal with before accepting people from overseas. (1) Current health examinations are established in accordance with prevalence of diseases occurring in Japan, such as early detection of stomach cancer. Advice concerning changes to a patient’s lifestyle needs to be provided with consideration of the environment in the countries where the people normally live. Examination lists suitable for the common diseases and lifestyles seen in patients’ native countries are required, as well as post-examination advice programs suitable for each country. (2) Appropriate attention is required when explaining results to patients so that there are no misunderstandings due to the fact their first language is not Japanese. Interpreters must be obliged to keep secrecy and have relevant medical knowledge. Ideally, there would be a medical interpreter qualification accreditation system established by the Japanese government or a third party. (3) Treatment plans for medical problems detected in the examinations need to be categorized: ones possible to receive while their trip in Japan, ones which must be treated in a patient’s home country, ones which require another trip to Japan, etc. Fully functional Japanese hospitals are usually busy, and many institutions do not have enough resources to accept people from overseas who speak different languages and have different customs. Quite a few people wish to have further examinations and treatments if abnormalities are found in health examinations, but well-known hospitals are usually very busy. Doctors of such institutions may have to give overseas visitors priority over local patients, so understanding will be required. There is a risk that people with abnormal results, such as susped glaucoma by funduscopy or a positive fecal occult test may be left out because no appointment for further examination is available for these visitors while they are in Japan. (4) The quality control of health examinations is administered by Japan Society of Health Evaluation and Promotion and Japan Society of Ningen Dock, but it is better to be done by internationally recognized evaluation standards. (5) Travel agents overseas may plan tours to bring several hundreds of people each year to have health examinations in Japan and request fees. Some medium-sized hospitals with health examination facilities may refer patients to their own hospitals for further examinations to increase their income. If these issues are solved and a highly beneficial health examination system is created, there is hope for this service being established as continuous type of ongoing medical tourism. For this, the government and relevant associations need to build a basic framework of cooperation. If an internationally recognized quality control system is established, this will also be useful for Japanese people.

7. Accumulating Evidence for Globalization

Cross-sectional and longitudinal studies of those who undergo health examination are currently conducted, and this data only applies to the people who continue to receive health examinations. As for people who have stopped being examined, we have no exact information on why they have discontinued the exams. The definite diagnoses of those who instructed to receive further examinations have revealed partly50. In Japan, carrying out RCTs to compare those who have had health examinations and those who have not is not easy. If such RCTs are not available, inventory survey of prognosis of subjects who had examination could provide some evidence on the usefulness of health examinations. Among the tests currently included in the voluntary health examination in Japan, only a few of them are recommended by the above-mentioned USPSTF. Most of the tests on the list are conducted without enough evidence of whether or not they are useful. This may be acceptable when providing these examinations in Japan to Japanese people, but having many people from overseas for such examinations or conducting a Japanese health examination system in overseas countries will not be easy. Showing solid evidence of the usefulness of undergoing voluntary health examinations to the world is necessary for the globalization of the examinations. The cost effectiveness of health examinations also needs to be reviewed based on the evidence. There needs to be a review to determine which tests for which types of patients are the most cost-effective, and these results need to be
published. When this is complete, it should also help to greatly improve the health examinations in Japan. The purpose of health examinations is to improve the health of those who undergo the examinations; and if voluntary health examinations which have been developed in Japan achieve this goal, the system should be accepted internationally.

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REFERENCES