

Short Communication

Report on Ambulatory Teaching : A Japanese Look at the Canadian Educational System

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BACKGROUND : Japanese medical education has undergone dramatic changes over the last 5 years. Clinical exercises and ambulatory-care training are now stressed to prepare medical students and residents for work in primary and continuing-care settings. For comparative purposes, we conducted a review of the undergraduate and residency training programs for ambulatory care at the University of Toronto in Canada. This report will examine the problems of training programs for ambulatory care in Japan by comparing the Canadian and Japanese models.

METHOD : From December 2004 to March 2005, the first author observed the ambulatory training systems at the University of Toronto.

OUTLINE OF CANADIAN AMBULATORY TRAINING PROGRAMS : There are three typical types of ambulatory training programs in Canada : community-office based programs for undergraduate students in family and community medicine ; hospital/clinic based programs for junior residents in internal medicine ; and consultation service programs for senior residents in internal medicine. Undergraduate and residency training programs are largely consistent with each other. The current trend in medical education is towards increased consolidation and efficiency in teacher and student training systems, with a reduction in the number of teaching hospitals and integration of teaching staff and curricula. Moreover, team-based training for ambulatory care appears effective.

DISCUSSION : To improve the Japanese ambulatory training system, it is desirable to increase communication and contact between undergraduate-program educators and residency-training program educators in order to achieve integration and consistency between programs.

KEY WORDS : clinical clerkship, residency training, ambulatory care, community-based training, preceptor-based training, team-based training

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The Japanese medical education system has undergone dramatic changes over the last 5 years. In undergraduate education, the National Model Curriculum, consisting of more than 1200 objectives recommended by a consortium of 80 medical universities, was implemented by the Ministry of Education, Culture, Sports, Science and Technology (MECSST) in 2005, along with a standardized Common Achievement Test.¹ In postgraduate education, a new national postgraduate residency program, which includes community-based training, was set by the Ministries of Health, Labour and Welfare (MHLW) and began in 2004.² Moreover, the Japanese government announced that the number of hospital beds would be reduced in the 21st century public health plan.³ Within these changes, clinical exercises and training for ambulatory care are consolidated in order to give opportunities for primary-care and continuing-care education to medical students and residents. However, a training system for ambulatory care has not yet been established throughout Japan.

We studied the undergraduate and residency training programs for ambulatory care at the University of Toronto (U of T) in Canada. The goal of this paper is to discuss the problems of training programs for ambulatory training systems in Japan by making comparisons with the Canadian model.

METHOD

From December 2004 to March 2005, the first author observed the training system for ambulatory care at the University of Toronto in the Department of General Internal Medicine at Toronto General Hospital (TGH) and the Department of Family and Community Medicine at North York General Hospital (NYGH).

OUTLINE OF CANADIAN AMBULATORY TRAINING PROGRAMS

Figure 1 shows the process for becoming a family physician or a general internal medicine physician in the province of Ontario, Canada. In this chart, there are five main types of training programs for ambulatory care. The first is the community-based clerkship program for third year medical students in family and community medicine. The second is the hospital-based residency program for postgraduate year one and year two (PGY1, PGY2) residents in medicine. The third is the consultation service program for PGY3 and PGY4

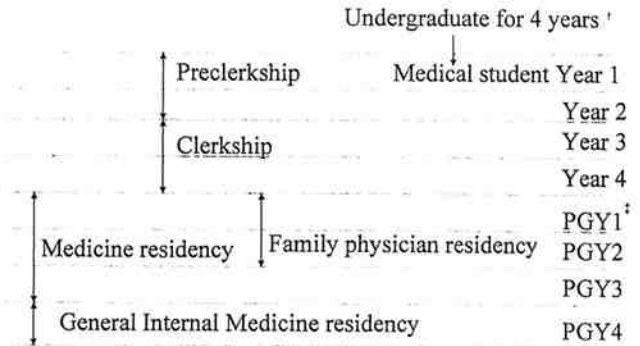


Figure 1. Flow chart of Canadian residency. At the end of each residency, trainees have to take license tests. ¹To enter medical school, students have to graduate from a university. ²Post graduate year.

in the general internal medicine residency program. The fourth is the rotation program in emergency training. The fifth is the residency program for family medicine. We focused on the first, second and third programs. Table 1 compares the three types.

1) The community-office based program

The objectives of this program are to familiarize students with fundamental skills, knowledge, attitudes about primary care, and continuing care in community-based medicine.

Here is an example of a typical day. From 9am to 1pm, a student treats 6-7 patients at a preceptor's office (family physician) near NYGH, an hour by subway from downtown Toronto. It takes about 20 minutes for the student to treat one patient independently and in parallel with a preceptor and another 20 minutes for the preceptor to work with the student and finish treatment of the patient. At the end of the morning block, the preceptor checks the student's records and gives feedback for 10-20 minutes. In the afternoon, the student moves to another preceptor's office and treats 5-10 patients, or goes to an educational activity, such as a seminar.

2) The hospital-clinic based program

This program is aimed at providing a continuum in medical education which builds on previously acquired knowledge and skills in basic science and clinical medicine. In particular, residents learn how to make decisions and choose the direction of treatment in a limited time.

Here is an example of a typical day. A temporary

Table 1. Three typical types of clerkship and residency training programs for ambulatory care at the University of Toronto

Type of training programs	community based	hospital based	consultation
Place	community office	hospital clinic	hospital clinic, ward
Subject	Family Medicine	Medicine	General internal medicine
Learners	3rd year medical students	Post Graduates 1st/2nd year	Post Graduates 3rd/4th year
Teaching format	preceptor	team	team
Patient type	follow up new	follow up consultation from FD [†] follow up after ER [‡]	pre operation post operation
duration of training	4 week	half a day per week for two years	one month
average number of patients treated by a trainee per half a day	6	2	2
average time spent on treatment per patient (minutes)	40	60	70

[†]Family doctors [‡]Emergency departments

one-month team consists of four junior residents (two PGY1 and two PGY2), two senior residents (one PGY3 and one PGY4), and one staff at the ambulatory care office at Toronto General Hospital (TGH) in downtown Toronto. At 1pm, the PGY3 resident gives a short problem-based presentation about a relevant topic and the group discusses it in the meeting room. After that, junior residents treat one patient respectively for 20–30 minutes in a room and return to the meeting room. For 15 minutes, they meet with senior residents or staff doctors. The junior residents then return to their rooms, sometimes with the senior residents and staff members, and explain plans for treatment to their patients for 15 minutes. After that, the group reviews the major problems again for a few minutes, and then the junior residents record their summaries, which can be checked by the staff doctor.

3) The consultation service program

This program focuses on teaching residents how patients move from primary caregivers to consultants. Issues such as timeliness and communication skills are stressed.

Four big downtown hospitals in Toronto participate in this consultation service. At TGH, they have a consultation clinic which treats all patients (inpatients and outpatients) in consultations with specialists and family physicians. Each month, a team consists of five PGY3, one PGY4, and four staff physicians.

From 8:30am to 9:30am, residents attend morning lectures and rounds, including case-oriented, evidence-

based rounds. From 9:30am to 1pm, the team treats 5–8 outpatients. This teamwork is similar to the work of the hospital-clinic based program, but on the day of observation there are many difficult cases that senior residents and staff are required to spend a long time dealing with. In the afternoon, they receive consultation on inpatients and emergent cases.

DISCUSSION

While comparing the Canadian and Japanese training systems for ambulatory patients, many recommendations for improving Japanese medical education suggest themselves. Takeda *et al.* analyzed the Japanese training system for ambulatory patients and pointed out that it lags behind the U. S. and the U. K. in many areas.⁴ In Canada, there are problems similar to those in Japan, such as a shortage of teachers and insufficient funds for ambulatory-patient training. However, they have established training superior to Japan's by implementing creative solutions within the existing system.

First, to promote a training system for ambulatory care throughout Japan, undergraduate programs should work in close cooperation with residency programs.⁵ In 2004, the Japan Society for Medical Education released a report describing a desirable educational environment for improvement of the educational organization of clinical clerkships, including clinic-based and community-based training.⁶ In 2003, the Japanese Academy of Family Medicine proposed a method to incorporate residency primary care programs into community-based medicine.⁷ However, it has been difficult to maintain

consistency between undergraduate and residency programs. A major stumbling block is the fact that medical schools develop undergraduate programs but, with the exception of hospitals that are affiliated with medical schools (18.6% of all residency programs in Japan, 2004), most independent hospitals (81.4%) develop their own programs.⁸

In Canada, the 16 medical schools have coordinated their undergraduate and residency programs with all teaching hospitals run by the same department chief and executive committees, and frequently employ the same teachers in both programs. All residency-training programs must be accredited by a third party.⁹ Each program is always guided by the goals and principles of the department. Therefore, in ambulatory care medical training, the curriculum remains consistent from the first year of medical school to the final training of a PGY4 resident. We reported earlier that Canadian family medicine remains strongly consistent from the curricula of medical students to continuing education programs.⁹

Secondly, to establish the ambulatory care-training system in a prefecture or large city, a university and fully or partially affiliated teaching hospital needs to play an important role.¹⁰ In Canada, various trials have been attempted and in 2002 U of T and its teaching hospitals jointly established a special unit, called the 'Centre for Faculty Development,' by coordinating and unifying each hospital's activities to develop efficiently the abilities of teachers.¹¹ The Centre offers a training program which includes methods for clinical teachers to teach in their offices. U of T has initiated the promotion of an evaluation system for teachers and students through information technology, which is connected to rural hospitals. As consultation services are unified among several hospitals, the consolidation and efficiency of medical services will match developments in medical education.

Third, the co-teaching format (preceptor-based, team-based) is also important for undergraduate students and residency training for ambulatory care. Community-based training is preceptor-based training at NYGH, but is similar to a co-teaching team system (a team consists of one student and two preceptors). The director at NYGH coordinates and controls four teams to conduct an effective clerkship. It was reported that team-based training has several instructional advantages. This type of informal teaching is more highly rated by students than single-preceptor based training.¹² The Ontario provincial government is promoting the

team system of community-based physician practice to compensate for the shortage of doctors and make it possible to treat patients more efficiently while reducing the burden on doctors.¹³ This movement may affect the educational system and accelerate team-based education.

In hospital-clinic based residency training for ambulatory, the system is completely team-based, as is the training for inpatients in internal medicine at U of T. The consultation-services program is more organized than the team-based system. One of the advantages of team-based training is that students and residents receive significant information support from team members in making decisions at the clinic and obtain quick feedback from peers and teachers on their investigations and treatment plans. Our impression is that the confidence of Canadian trainees in patient management is more solid and independent, thanks to systemic team support, than that of Japanese trainees.

In this report, we have identified three problems with the Japanese ambulatory training system. We would like to propose strategies that can deal with these problems in a realistic and concrete manner.

First, with regard to the inconsistencies between undergraduate and postgraduate programs, each university and its educational hospitals should develop a comprehensive curriculum that will offer continuity between undergraduate and postgraduate programs and therefore increase teaching efficiency. For example, undergraduates in 3rd or 4th year should begin preceptor-based ambulatory training in community offices that will bring them closer to experience with primary care. Students could then progress to increasing levels of difficulty, with ambulatory training in general medicine in teaching hospitals in their 5th and 6th years, and ambulatory training in individual departments of the University during their postgraduate years. Through this process, students would be able to deepen their understanding of the flow of the Japanese medical system, from local primary care to specialized care in universities. At each step, they could acquire the knowledge, skills and attitudes required to navigate a system that is becoming increasingly specialized and complex.

Second, MECSST and MHLW should work together to conduct teaching workshops for Japanese educators and clinical teachers to improve teaching skills, based on principles of adult education. Improving teaching skills and maintaining a high quality of teaching will improve the quality of Japanese ambulatory training and ultimately improve the Japanese medical system as

a whole.

Third, university and teaching hospitals should employ general practitioners who run their own clinics to serve as educational resources. Some general practitioners were educators in university and teaching hospitals before opening their own clinics, so many will have the abilities required to teach students.

Of course, the most difficult problem facing our proposals will be budgetary restrictions. However, with regard to the first proposal, this difficulty can be overcome by merging undergraduate and postgraduate educational committees and creating a new committee for ambulatory teaching in universities. Regarding the second proposal, it is also possible to adapt existing teaching workshops that have been implemented by university and teaching hospitals, including national hospitals, and adding new concepts on ambulatory teaching to these workshops through MECSSST and MHLW.

Concerning the third proposal, universities must support general physicians as teachers financially, academically and socially. As we reported on the Canadian system with regard to this issue, some universities and/or provincial governments have recently subsidized community office-based physicians as preceptors.¹⁴ One of the Canadian concepts for ambulatory teaching and learning is that when medical students and residents learn from good teachers about the primary-care role in community, office-based situations, they become conscious of the important role of primary physicians and the medical costs of public health, which are very different from those of hospital-based situations.¹⁴ In the long run, they will reduce medical costs in the future through their practices. We believe this concept will also work well in Japan because the Canadian and Japanese health care systems are very similar and based on universal health care.

In conclusion, based on the positive aspects of the standardization and efficiency of the ambulatory training system in Canada, it is reasonable to conclude that in every educational situation, such as those found in MECSSST, MHLW, universities and teaching hospitals, cooperation among and unification of training systems for ambulatory care are vitally important. We should seriously discuss and outline a clear, cooperative and systematic process that will ensure the development of effective undergraduate and residency training programs for ambulatory care.

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