

Outpatient teaching in family medicine residency training programs in Taiwan

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Abstract

The Taiwan Association of Family Medicine (TAFM) was established in 1986. At the present time Taiwan has a total of 66 residency training programs with approximately 150 first-year residents accepted per year. The TAFM realizes and values the importance of outpatient teaching for family medicine residents. Following the guidelines of outpatient training for residents set in 1989, the first-year, second-year, and third-year residents should attend the outpatient teaching at least once, twice, and three times per week, respectively, at the designated Family Medicine Clinic. Residents also receive outpatient training from qualified preceptors during their community rotations, wherein services are provided to patients in the clinics, their homes or communities where they live. In this review article, guidelines on outpatient teaching in the family medicine residency training programs made by the Taiwan Association of Family Medicine will be described, followed by my personal experiences about teaching family medicine at an outpatient clinic.

Family practice is characterized by its first-contact, office-based, patient-centred, family-as-a-unit, and prevention-oriented care. Obviously, the outpatient clinic is the proper place to demonstrate and practice the characteristics of family medicine. A family physician spends approximately 90% of his/her working time on outpatient services, followed by inpatient care, institutional care and home visits. Moreover, outpatient practice at the Family Practice Center has been the most important training curriculum for family medicine residents throughout the world.

Quality ambulatory teaching requires the following:

1. Preliminary class: introduction to the practice, operating procedures for the practice, communication skills, use of computer, and evidence-based medicine.
2. Teaching primer: at least two partially connected examination rooms for each learner must be provided.
3. Teaching facilities: standardized outpatient facilities, documents, and computer systems.
4. Trainers: attending staff, chief residents, and allied professionals who have received adequate preparation for both first-time teachers and continuing professional development training.
5. Evaluation system: video-taping, one-way mirror, review of medical records, clinical performance examination with standardized patients for learners, and also evaluation of the learning experience by the learners.
6. Financial arrangements: rewards and credits to the trainers, funds to support the expenses, and maintenance of teacher enthusiasm.

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Key words: outpatient teaching, family medicine, residency training

Introduction

Family practice is characterized by first-contact, office-based, patient-centered, family-as-a-unit, and

prevention-oriented care.¹ Obviously, the outpatient clinic is the proper place to demonstrate and perform the characteristics of family practice.² A family physician spends approximately 80–90% of his working time in outpatient services, followed by inpatient care, institutional care, and home visits.³ At the Johns Hopkins University School of Medicine, US, a 4–5 week ambulatory medicine clerkship is required for every medical student.⁴ Moreover, outpatient practice at the

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Accepted for publication 18 February 2005.

Family Practice Center has been the most important training site for family medicine residents throughout the world.²

Historical perspectives

Before the mid-19th century, apprenticeship was the main model of medical education.⁵ Utilizing the proposal by Sir William Osler, the Johns Hopkins University School of Medicine was the first medical institution in North America to organize outpatient teaching for medical students (1901).⁶ The Flexner Report on medical education in the US and Canada in 1910 highlighted outpatient teaching.⁷ Moreover, ambulatory care has been one of the main issues in medical education reform since the late 1980s, and outpatient teaching has become an essential component of graduate training for all specialties, especially for family practice.^{8,9}

Outpatient medicine and family medicine

It has been recognized that the family practice clinic is the proper setting to demonstrate the characteristics of family medicine.² This implies an office-based practice, utilizing first-contact care and using a biopsychosocial model. It also integrates prevention and medical care, and stresses a team approach. It is patient-centred but revolves around the family-as-a-unit-of-care and is oriented towards the community. Outpatient practice is the main way to test and enrich the principles of family medicine. Certainly, the outpatient clinic is also the main workplace for family physicians. The American Academy of Family Physicians (AAFP) reports that on the average, family physicians work approximately 50 hours and see 100 patients per week, and 80% of the working time is used for outpatient care.³ In Taiwan, an average family physician/general practitioner works 60 hours and sees 200 patients per week in the clinic, and the working time is used mostly for outpatient care.¹

Contents of outpatient teaching

In every patient encounter, family physicians deal not only with the patients' chief complaints, but also with their unresolved problems and other issues. In addition, family physicians see the patient encounter as an opportunity to provide needed preventive services and to promote the doctor-patient relationship. All of these considerations are what we must teach our residents. We should also impart the importance of practice management, and clinical approach relying heavily on evidence-based medicine and informatics. The emergence of managed care and social health insurance are other issues to touch on, especially since this is a common experience in Asia-Pacific region.¹

Preparations for outpatient teaching

Implementation of outpatient teaching requires that the following are done or be made available:¹⁰⁻¹²

1. Preliminary class: trainees shall be oriented properly about the practice, its operating procedures, communication skills, use of computer, and evidence-based medicine.
2. Teaching premise: at least two partially connected examination rooms for each learner must be available, one for consultation and the other may be used for physical examination.
3. Teaching facilities: standardized outpatient facilities such as comfortable chairs and facilities for physical examinations, documents and records, and computer systems.
4. Trainers: attending staff, chief residents, and allied professionals who have received adequate preparation for being very new teachers or have received adequate continuing professional development training. For example, our department has two phases of faculty development programs, namely: orientations phase (2 days) for every new faculty member and those with less than 3 years of teaching experience; and proficiency phase (2 days) enabling one to progress into a proficient medical teacher.
5. Financial arrangement: rewards and credits to the trainers, funds to support the expenses, and maintenance of teacher enthusiasm.

Process of outpatient teaching

In our program at the Department of Family and Community Medicine, Chung Shan Medical University, all medical interns, residents and staff get together for a morning meeting in the outpatient department. We preview medical records of the patients who have made appointments and discuss possible plans for them before the patient encounter.¹² Initially, the junior resident shall observe and work with the faculty for 6 months, and then they may see a limited number of patients (five per clinic session) with close supervision by the faculty (e.g. every patient should receive a double-check before he or she leaves). For senior residents, they may see a reasonable number of patients (around 15 per clinic session) with subsequent faculty review (**Fig. 1**). The faculty usually introduces the resident to the patients and explains the process of their consultation, so that residents will interact comfortably with patients whom they might not otherwise be very familiar. At the end of the outpatient session, the faculty and residents will get together to discuss whatever questions they have and to process experiences (**Fig. 2**). Time for reflection is given.^{2,12} For some procedures performed in the outpatient department such as a Pap smear, intra-articular injection, cauterization, cryotherapy, skin biopsy and so



Fig. 1. Senior residents may see a reasonable number of patients (around 15 per clinic session) with subsequent faculty review



Fig. 2. At the end of the outpatient session, the faculty and residents will get together to discuss whatever questions they have and to process experiences.

on, the faculty should demonstrate these and then assist the residents until they become proficient.

Looking into the impact of clinical experience in family medicine outpatient clinics, at least one study indicated that medical students who have completed their outpatient clerkship at the Family Medicine Clinic in this kind of set-up showed a greater positive attitude toward family practice as a future career¹³ than prior to the outpatient rotation.

Teach problem-solving in the outpatient setting

Since there is limited time and resources in the outpatient setting, residents should learn how to resolve patients' problems efficiently and effectively. Residents are encouraged and guided to apply epidemiology,¹³⁻¹⁵ for example the concept of probability (frequency, prevalence, the positive and negative predictive value), and risk (relative risk/odds ratio) in the diagnosis and management of patient problems. In addition, informatics-assisted practice, and legal as well as ethical concerns, should also be taken into consideration.¹⁶⁻¹⁸ In the 21st century, everyone must be fully acquainted with the informatics system. This may be quite helpful for medical practice. Informatics can help in clinical decision-making, and as a reminder for preventive services.

A good example of utilization of informatics in our practice is the family profile. We are able to monitor patients' families in terms of the mean time of each individual consultation by just clicking 'the family profile' (**Fig. 3**) which contains family structure, family life cycle and events, and the individual health summary of each family member. This obviously is very significant for family care. For example, you can see one family member and monitor or talk about health status of all other family members based on the on-line family profile system.

Evaluation of outpatient teaching

Traditionally, we use a one-way mirror, video-tapes and audits of medical records to review learners' performances. In recent years, objective structured clinical examination (OSCE)^{19,20} using standardized patients has become popular and proven to be practical. The learner's assessment of faculty teaching is also needed for improving the outcome of outpatient teaching.

Future direction

The discipline of family/community medicine has performed outpatient teaching for more than 20-30 years. What are our future directions? First, we must address and clarify the following points:^{21,22}

1. Has outpatient teaching been carried out seriously?
2. To what extent should every learner be closely supervised by the faculty?
3. Does the practice have enough patients and health problems for teaching?
4. Have both the behavioral and the social sciences been highlighted in outpatient teaching?

Conclusion

In conclusion, the outpatient clinic is the main place for family medicine residents and medical students in Taiwan to learn ambulatory medicine, and to realize and demonstrate the principles and characteristics of family medicine. Therefore, an ambulatory rotation is required for each resident and student. Through required ambulatory experience, the family medicine resident will learn to be an effective family doctor.

Figure 3. Electronic Medical Record for the Individual Patient, CSMUH-FMC

Personal Profile	Family Profile*	Laboratory Report	Image Report	Past Medical Records	Expert System	Prevention Reminder**
Name: Birthday: Gender: Personal identification card:						i [†] Health Education i [†] Periodic Health Exam. i [†] Cancer Screening i [†] Immunizations
Subjective:						
Objective:						
Assessment:						Practice Management
						Date: Insurance: Charge: Appointment:
Plan:						

CSMUH-FMC: Chung Shan Medical University, Family Medicine Clinic

*When you click "Family Profile", family structure, individual member (including his or her brief medical record), function, and events will be shown together.

**Prevention reminder system will automatically remind physicians of optimal preventive services for the individual patient.

Fig. 3. Electronic Medical Record for the Individual Patient, CSMUH-FMC

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