日本のプライマリ・ケアに適した外来診療モデルのニーズ調査

Title

A questionnaire survey of the need for a primary care consultation model in Japan

Akira Mochizuki[1*], Takumi Kawai[1], Aya Goto[2], Ryuki Kassai[1]

[1]Department of Community and Family Medicine, Fukushima Medical University, Fukushima, Japan

[2]Department of Public Health, Fukushima Medical University, Fukushima, Japan

[*]Corresponding author

Abstract

Background: Although consultation models published in Western countries (Western models) are reportedly useful for primary care and student and resident education, it is unclear whether these models are suitable for primary care settings in Japan. This study aimed to assess the primary care situation in Japan and the need for consultation models that fit the local context of primary care in Japan ("Japanese models") and to explore factors associated with the need for such models.

Methods: We conducted a cross-sectional survey of 127 family medicine residency programs in Japan, consisting of a questionnaire about the respondents' background, training, and concerns about primary care and consultation models. We analyzed data obtained from 56 of these programs and compared characteristics of residents and attending physicians in clinics without inpatient beds and in hospitals. We also analyzed factors associated with the need for "Japanese models".

Results: Respondents were 147 doctors from 56 family residency programs, who saw on average 17.9 ± 10.4 patients (5.7 ± 4.8 new cases) within a 3-hour period. Average of consultation length for new and follow-up cases was 20.7 ± 11.5 and 10.0 ± 5.3 minutes, respectively. Access to higher-level medical services was considered very good. In clinics without inpatient beds, more attending physicians than residents underwent primary care training during hospital internships and devised outpatient care approach based on personal characteristics. In hospitals, few attending physicians underwent primary care training in family medicine residency programs. Fewer residents than attending physicians knew about Western models. Residents who devised their own outpatient care approach tended to perceive a higher need for "Japanese models". In both clinics without inpatient beds and hospitals, attending physicians carried heavier workloads of outpatient care than residents. The perceived need for "Japanese models" was median score of 4 in clinics without inpatients beds and 3 in hospitals; 1–10.

Conclusions: Consultation length among our study respondents was comparable to that in Western countries. A need for consultation models that fit the local context of primary care in Japan is suggested; the need might differ according to practice setting, training experience, and individual practice style.

Background

Consultation skills in primary care are of great importance to family physicians, as highlighted by the Royal College of General Practitioners which states, "…consultation is at the heart of general practice" [1].

A consultation model is defined as a hypothetical description of a complex process in consultation [2], and such models are useful for outpatient consultation in primary care. Some models are task-oriented and, process or outcome-based; others are based on the doctor-patient relationship or the patient's perspective of illness [2]. Consultation models provide an educational framework for improving consultation [2]. These models enable physicians to reflect on where in the consultation process they are experiencing problems and what their aim is with the patient [2]. These models help identify the skills needed to achieving desired outcomes [2]. Studies on consultations in primary care have been conducted in many countries, and a number of consultation models have been published, particularly in Western countries. In this study, we define "Western models" as consultation models published and studied in Western countries. Examples include Patient-centered interviewing [3], the PROACTIVE model [4] and Task-oriented processes in care model in ambulatory care [5], which have been adapted by family physicians worldwide. These models assist in the management of primary care patients and the education of medical students and residents. Specifically, these models have improved students' performance as assessed by the Clinical Performance Examination scores [5], knowledge and attitudes of primary care residents [6], and the physical/psychological well-being and satisfaction of patients [6]. In addition, the health status of patients has been improved, and unnecessary diagnostic tests and referrals have been reduced [7]. Effective outpatient management of primary care is an important competency of family physicians.

Consultation length is an important issue in primary care, and several studies have examined it in Western countries [8-11]. Consultation length was found to decrease as the number of patients increased [12, 13], more psychosocial information was obtained from patients during longer consultations [14], and consultation length was related to patient satisfaction and compliance [15].

Medical practice in Japan differs in many ways from that in Western countries. Two studies

have reported a shorter length of primary care consultation in Japan [16, 17]. Also, according to the Organisation for Economic Co-operation and Development (OECD), Japan has more medical resources than other OECD countries, with 2.4, 4.4, and 3.5 times more than the average number of acute care beds, computed tomography (CT) scanners, and magnetic resonance imaging (MRI) units in OECD countries, respectively [18]. A 2011 report on medical facilities in Japan by the Ministry of Health, Labour and Welfare found that 2,268 (2.3%) clinics have multislice CT scanners (2,298 units) and 2,761 (2.8%) clinics have other types of CT scanners (2,768 units) [19]. Other differences include more frequent patient consultations in Japan based on an average of 13.1 consultations per person per year compared with the OECD average of 6.6 [18]. Japan has a healthcare system characterized by universal health insurance coverage [20] and a free-access system with no gatekeepers that allow people to be examined and treated at medical institutions of their choice. The healthcare system in place can affect patient behaviors. In Japan, family physicians provide primary care not only in clinics but also in hospitals, and family medicine residents undergo training in hospitals as well [21]. Due to these differences in practice environment, performance of family physicians in Japan might well differ from that of their Western counterparts.

There is no study about consultation models in Japanese primary care situation and few studies have examined primary care issues such as consultation length in Japan. Japanese family physicians learn Western models by attending domestic lectures and workshops such as those held by the Japan Primary Care Association (formerly known as the Japanese Academy of Family Medicine) [22]. However, whether Western models benefit family physicians in Japan remains unclear because these models are based on a practice context different from that in Japan; for example, longer and less frequent consultations, less access to acute care beds, and fewer CT and MRI facilities. These differences let us suspect there is a need of consultation models suitable to the local context of primary care in Japan, which we define as “Japanese models” in this study.

The aims of this study were to assess the primary care situation in Japan, including consultation length, available medical resources, and practice setting, to estimate the need for “Japanese models”, and to explore factors associated with this need in both clinic and hospital settings.

Methods

Respondents and procedure

A cross-sectional questionnaire survey was conducted from November 2011 to February 2012. A list of all 127 family medicine residency programs accredited by the Japan Primary Care Association as of November 2011 was obtained from the association's website [21], and questionnaires were mailed to the designated contact person of each institution's residency program. The mailed package consisted of a set of questionnaires and a letter explaining the survey's purpose and requesting participation from all doctors in the program.

Questionnaire

The questionnaire was constructed to examine differences in primary care practice between Japan and Western countries, and the need for "Japanese models". Questions concerned the respondents' background, training, current practice, and concerns about primary care and consultation models.

Specifically, respondents were asked the following questions regarding their background: sex, years after graduation from medical school, position (resident, attending physician, or other), and practice setting (clinic without inpatient beds, clinic with inpatient beds, or hospital). Questions about the respondent's current practice included outpatient care workload as measured by units of duty (i.e., one unit is equivalent to approximately 3 hours in the morning or afternoon) per week; average number of patients seen per unit; average number of new cases seen per unit; and average consultation length (in minutes) for new cases and for follow-up cases. We examined access to higher level medical service agencies and specialists using the question, "How do you feel about referring patients to higher level medical service agencies or specialists?" (Options were "very easy," "easy," "average," "difficult," or "very difficult".)

Questions about primary care training included timing (internship, family medicine residency, other residency, or other) and settings (clinic without inpatient beds, clinic with inpatient beds, hospital, or other). Concerns about primary care practice were assessed by asking, "Do you have any strengths or weaknesses in the provision of outpatient care?" and "If so, did you devise a patient care

approach based on these points?" To explore the respondents' motivation to use Western models and their concerns about these models, questions were designed based on the knowledge, attitude and practice (KAP) survey and the conviction-confidence model. The KAP survey is a representative study of a specific population to collect information on what is known, believed, and done about a particular topic [23], and the conviction-confidence model is a well-known behavioral science model used to explain patient motivation [24]. Questions about consultation models were: "Do you know any consultation models published in foreign (Western) countries?" "How important are these models in your current practice?" and "Are you confident in using these models?" Finally, respondents were asked, "Do you need suitable consultation models for the Japanese primary care context?" They then rated their answers about the importance of Western models, their confidence in using such models, and the need for "Japanese models" using a scale of 1 to 10 (1 being the highest).

Statistical analysis

A total of 178 respondents from 56 family medicine residency programs responded to the survey. The response rate at the program level was 44% (56/127). We guessed there were major differences between clinics and hospitals in terms of doctor's roles and patient's characteristics. That is why we divided respondents' data by practice setting, and analyzed these data separately to avoid risks such as Simpson's paradox that might mislead our analysis. And then we excluded doctors working in clinics with inpatient beds (13 respondents) or answering "other" to a question of their practice position (13 respondents) from the analysis due to the limited number of respondents and to interpret results simply. We eventually used total 147 respondents' data in our analysis.

Individual variables were compared between residents and attending physicians in two practice settings: clinics without inpatients bed and hospitals. Responses to the need for "Japanese models" were divided into two groups by rating (high-need group ≤ 5, low-need group ≥ 6). Next, variables were compared between the high-need group and low-need group for residents and attending physicians, respectively. Factors associated with the need for "Japanese models" were analyzed among only those respondents working in hospitals due to the limited number of respondents

working in clinics. Variables were units of duty per week, number of patients seen per unit, number of new cases seen per unit, consultation length for new cases and for follow-up cases (in minutes), sex, training time period (internship, family medicine residency or "other" [other residency and other]), training setting (clinic [without and with inpatient beds] and other, or hospital), devising patient care approaches based on personal strengths or weaknesses (yes or no), knowledge of Western models (yes or no), and importance of and confidence using Western models (1-10 scale). Categorized variables were analyzed using the Fisher's exact test and continuous variables were analyzed using the Mann-Whitney U test.

For all analyses, *p*-values less than 0.05 were considered statistically significant. All statistical analyses were performed using SPSS Version 17.0 for Windows [IBM, Armonk, NY].

Ethical considerations

This study was approved by the institutional review board of Fukushima Medical University (Registration No. 1287). Survey participation was voluntary and anonymous. The mailed survey package included a letter that explained the study's purpose, anonymity, and privacy protection. Consent to participate in the survey was implied by return of the completed questionnaire in a sealed envelope.

Results

Table 1 shows the respondents' background characteristics, practice situations, and primary care training. Among respondents working in clinics without inpatient beds, years after graduation from medical school were about ten year apart between residents and attending physicians (5.3±2.2 vs 15.9±9.2, $p < 0.01$). More than half of the residents underwent primary care training during their family medicine residency in clinics without inpatient beds. On the other hand, more attending physicians than the residents underwent primary care training during their hospital internship. Attending physicians saw more outpatients than residents (19.1±10.9 vs 12.0±4.9, $p = 0.05$). Among respondents in hospitals, years after graduation from medical school were about ten years

apart between residents and attending physicians (4.7±2.1 vs 16.0±9.1, $p < 0.01$) in same difference of respondents in clinics without inpatients beds. Fewer attending physicians underwent primary care training during their family medicine residency. Attending physicians' outpatient care workload including units of duty per week (3.4±1.7 vs 2.6±2.0, $p < 0.01$) and number of patients per unit (23.3±11.3 vs 13.0±7.0, $p < 0.01$) was heavier than residents'. Attending physicians' consultation length (minutes) were shorter than residents in both new cases (17.7±9.4 vs 24.3±13.6, $p = 0.01$) and follow-up cases (8.4±3.6 vs 10.9±5.9, $p = 0.01$)

Table 2 shows concerns about primary care and practice models. Among respondents in clinics without inpatient beds, more attending physicians than residents devised outpatient care approaches based on personal strengths or weaknesses (73.9% vs 33.3%, $p < 0.05$). The need for "Japanese models" was median 4 in both residents and attending physicians. Among respondents in hospitals, more attending physicians than residents knew about Western models (44.2% vs 21.1%, $p < 0.05$). The need for "Japanese models" was median 3 in both residents and attending physicians.

Tables 3 and 4 show the association between the need for "Japanese models" and respondent characteristics for residents (Table 3) and attending physicians (Table 4) in hospitals. We found that more of the residents who created their own patient care approach perceived a higher need for "Japanese models", with borderline significance ($p <0.1$).

Discussion

In this study, respondents, especially in hospital settings, expressed relatively a high perceived need for "Japanese models" suitable to the local context of primary care in Japan. Despite limited responses, this was the first nationwide study to explore the need for consultation models in Japanese primary care context.

Difference of years after graduation from medical school between residents and attending physicians in respective practice settings might be important to interpret respondents data gained from this survey. Internship training have become a compulsory clinical training system for medical school graduates since 2004 in Japan [25]. The Hokkaido Centre for Family Medicine started family

residency program firstly in Japan, 1997 [26]. After that, the Japanese Academy of Family Medicine started accrediting family medicine residency programs in 2007 [21]. In those days, when these programs started, some doctors who wanted to be family physicians didn't belong to the accredited programs and moved from department to department in hospitals to learn skills, they thought, needed for family physicians [27]. Residents and attending physicians in our survey might have experienced different training situations, which could influence their practice style.

Our findings show that Japanese family physicians at both clinics without inpatient beds and hospitals spend a comparable amount of time with patients, as do their Western counterparts. According to Deveugele et al. [12], average consultation length in Western countries ranges from 7.6 to 15.6 minutes, which is longer than that previously reported in Japan [16, 17]. This disparity might result from various factors through complex process. Factors of physicians might include training experiences, personal practice style and so on. Factors of external circumstances might include healthcare system, health resources, workloads and outpatient care system, for example reservation system or not. These factors could be influenced by historical background. In the past, many family physicians in Japan undergoing clinical training in internal medicine, were used to seeing many patients (around 60-100 each day) [28] and so had to limit their time with each patient. In contrast, respondents in this survey belonged to specific family medicine residency programs that focused on primary care with lower numbers of clinic patients. The trend towards longer consultation times in this study is to that in Western countries. However, more in-depth investigation is needed to clarify the background of this tendency we observed.

We found some characteristic trends between residents and attending physicians in this survey. Attending physicians in clinics without inpatient beds underwent outpatient care training during their hospital internships and received less training in specific primary care education. They carried heavier outpatient care workloads than residents in the different setting from that of their training. This might partly explain why they devised their own patient care approach. On the other hand, many residents in clinics without inpatient beds underwent outpatient care training during their family medicine residency in clinic settings, and less proportion of them devised their own approach

unlike their senior colleagues. One study, however, showed that family medicine residents might need to change their practice style once they begin solo practice after graduating from the family medicine residency program [29], which implies that the residents in clinics in our study might also have started devising their own outpatient care approach, from the point of view of practice finance, after completing their training.

In hospitals, more attending physicians than residents knew about Western models. Attending physicians in hospitals as well as in clinics without inpatient beds carried a heavier outpatient care workload than did residents. Doctors in hospitals have also inpatient care workload. It has been reported that hospital physicians, including residents, have little time for education and learning new skills [30, 31]. This might be the case among our survey's attending physicians in hospitals, who answered that they had little time to try the Western models that they knew about. In addition, the perceived need for "Japanese models" at hospitals might be related to the uniquely heavy workload in hospitals.

Residents in hospitals who devised a patient care approach tended to perceive a higher need for "Japanese models". They were aware of their strengths and weaknesses, which possibly related to a stronger need for a consultation model fitting their practice style. Previous studies reported that other factors such as age and sex were associated with practice and communication styles [32-36]. Although not statistically significant, a higher proportion of women respondents belonged to the high-need group in the present study. The present findings indicate the desire for consultation models by family physicians understanding their personal practice style, and physicians should use a model with strategies compatible with their style [37].

Several limitations in this study warrant mention. First, the selection of attending physicians was difficult due to the ambiguous definition. Family physicians belonging to family medicine residency programs expect residents are usually called attending physicians in the present circumstances. However, in the future, the definition of attending physicians of family medicine will become clearer owing to increasing formal certification of attending physicians by the Japan Primary Care Association. Second, we could not include respondents in clinics with inpatient beds in our

analysis, and result of this survey could differ from characteristics of the whole target group. Third, our results for consultation length could be inaccurate because the start and end of a consultation was undefined in this study, possibly causing differences in interpretation. The interpretation of "suitable consultation models for Japanese primary care context" could also have differed among the respondents. Fourth, the survey response rate was based on the institutions response. We could not calculate the doctors' response rate because we were unable to confirm the total number of doctors working in the family residency programs in Japan. This situation might change once accreditation of residency programs becomes more precise, making more information available for each residency program. Finally, most likely only residency programs that were interested in our study responded to the survey. Therefore, we need to develop methods for achieving a higher response rate. Also, further qualitative studies are needed to examine the reasons behind the perceived need of family physicians for "Japanese models". Meeting the needs of family physicians as advocates for the patients [38] is related to meeting patients' needs.

Conclusions

This study examined primary care practice and training, concerns about consultation models, and the perceived need for "Japanese models" by surveying 147 physicians from 127 family medicine residency programs in Japan. Our findings revealed that family physicians in the residency programs have good access to higher level medical services and specialists, and the length of primary care consultations among this study respondents is comparable to that seen in the West. This study suggested that there is a need for consultation models that fit the local context of primary care in Japan, and the need might differ according to practice setting, training experience, and individual practice style.

Competing interests

The authors declare that they have no competing interests.

Authors' contributions

AM devised the study and performed the statistical analysis. AG participated in the design of the study. TK, AG and RK helped to draft the manuscript. All authors read and approved the final manuscript.

Acknowledgments

We thank the physicians that participated in this survey and the contact person of each residency program. This study was funded by a grant from the Jinsenkai Medical Orchard Public Interest Incorporated Foundation in Fukushima, Japan. The funding body had no role in the study design, data analysis, manuscript preparation, or decision to publish. Parts of the study were presented at the Third Annual Conference of the Japan Primary Care Association on September 2, 2012 in Fukuoka, Japan.

References

[1] Royal College of General Practitioners: The GP consultation in practice. The curriculum statements of the Royal College of General Practitioners. London: Royal College of General Practitioners; 2010.
[http://www.rcgp.org.uk/gp-training-and-exams/~/media/Files/GP-training-and-exams/Curriculum-2012/RCGP-Curriculum-2-01-GP-Consultation-In-Practice.ashx]

[2] Revisiting Models of the Consultation. The Essential Handbook for GP Training and Education.
[http://www.essentialgptrainingbook.com/web-chapter-04.php]

[3] Smith RC: *Patient-centered Interviewing. An Evidence-Based Method.* Philadelphia: Lippincott Williams & Wilkins; 2002.

[4] Del Mar C, Doust J, Glasziou PP: *Clinical Thinking: Evidence, Communication and Decision-Making.* New Jersey: BMJ Books; 2006.

[5] Rogers J, et al: Task-oriented processes in care (TOPIC): a proven model for teaching ambulatory care. *Fam Med* 2003, 35(5):337-342.

[6] Smith RC, et al: The effectiveness of intensive training for residents in interviewing: A randomized, controlled study. *Ann Intern Med* 1998, 128(2):118-126.

[7] Stewart M, et al: The impact of patient-centered care on outcomes. *J Fam Pract* 2000, 49(9):796-804.

[8] Wilson A, Childs S: The relationship between consultation length, process and outcomes in general practice: a systematic review. *Br J Gen Pract* 2002, 52(485):1012-1020.

[9] van den Brink-Muinen A, et al: Communication in general practice: differences between European countries. *Fam Pract* 2003, 20(4):478-485.

[10] Phyllis B, et al: Interventions before consultations to help patients address their information needs by encouraging question asking: systematic review. *BMJ* 2008, 337(a485): 1-10.

[11] Ožvačić Adžić Z, et al: Patient, physician, and practice characteristics related to patient enablement in general practice in Croatia: cross-sectional survey study. *Croat Med J* 2008, 49(6): 813-823.

[12] Deveugele M, et al: Consultation length in general practice: cross sectional study in six European countries. *BMJ* 2002, 325(7362):472.

[13] van den Berg MJ, et al: Do list size and remuneration affect GPs' decisions about how they provide consultations? *BMC Health Serv Res* 2009, 9:39.

[14] Gude T, et al: A few more minutes make a difference? The relationship between content and length of GP consultations. *Scand J Prim Health Care* 2013, 31(1):31-35.

[15] Ogden J, et al: "I want more time with my doctor": a quantitative study of time and the consultation. *Fam Pract* 2004, 21(5):479-483.

[16] Adam NW et al: Truth or fallacy? Three hour wait for three minutes with the doctor: Findings from a private clinic in rural Japan. *Asia Pacific Family Medicine* 2010, 9:11.

[17] Matsushima D, et al: Relation between the actual and ideal consultation time in the outpatient setting. *Jpn J Prim* 2004, 27(3):179-185.

[18] OECD Health Data; 2011.

[http://stats.oecd.org/index.aspx?DataSetCode=HEALTH_STAT]

[19] Ministry of Health, Labour and Welfare of the Japan Government: Report of Medical Facilities in Japan [http://www.mhlw.go.jp/toukei/saikin/hw/iryosd/11/dl/1-3.pdf]

[20] Ikegami N, et al. Japanese universal health coverage: evolution, achievements, and challenges. *Lancet*. 2011, 378(9796):1106-15.

[21] Japan Primary Care Association [http://www.primary-care.or.jp]

[22] Denney ML: How to improve consultation skills teaching in outpatient clinics: some theory and practice. *In Proceedings of The Japanese Academy of Family Medicine Workshop:* 1-2 September 2007; Tokyo.

[23] WHO: Advocacy, communication and social mobilization for TB control. A guide to developing knowledge, attitude and practice surveys [http://whqlibdoc.who.int/publications/2008/9789241596176_eng.pdf]

[24] Keller VF, White MK: Choices and changes: a new model for influencing patient health behavior. *J Clin Outcomes Manage* 1997, 4(6):33-36.

[25] Ministry of Health, Labour and Welfare of the Japan Government: Website of Doctor clinical training system [http://www.mhlw.go.jp/topics/bukyoku/isei/rinsyo/menu.html]

[26] The Hokkaido Centre for Family Medicine: Website of history of the Hokkaido Centre for Family Medicine [http://www.hcfm.jp/hcfm/history.html]

[27] Yokobayashi K, Yamashita D. How do young family physicians choose their career and where do they receiving training? on-the-spot voices of residents at family medicine. *Jpn J Fam Pract*, 2007, 13(2), 26-33.

[28] Takemura Y: Family medicine: What does it mean? *Asia Pac Fam Med* 2003, 2:188-192.

[29] Yoshimoto H, et al: A study of the financial aspect of the clinical practice of a family medicine resident in Japan. *Jpn J Fam Pract*, 2009, 15(1), 20-25.

[30] Deshpande GA, et al: A global template for reforming residency without work-hours restrictions: decrease caseloads, increase education. Findings of the Japan Resident Workload Study Group. *Med Teach* 2012, 34(3):232-239.

[31] The Japan Institute for Labour Policy and Training: JILPT research report No. 102

[http://www.jil.go.jp/institute/research/2012/documents/0102.pdf]

[32] Heje HN, et al: Patients' assessment of their general practitioners--the significance of physician gender and age. *Ugeskr Laeger* 2010, 172(15):1112-1118.

[33] Biedma VL, Serrano del RR: Male physicians and female physicians, different medical styles: different users' satisfaction? *Salud Publica Mex* 2009, 51(4):277-284.

[34] Lagro-Janssen AL: Medicine is not gender-neutral: influence of physician sex on medical care. *Ned Tijdschr Geneeskd* 2008, 152(20):1141-1145.

[35] Nicolai J, Demmel R: The impact of gender stereotypes on the evaluation of general practitioners' communication skills: an experimental study using transcripts of physician-patient encounters. *Patient Educ Couns* 2007, 69(1-3):200-205.

[36] Vinker S, et al: Effect of the characteristics of family physicians on their utilisation of laboratory tests. *Br J Gen Pract* 2007, 57(538):377-382.

[37] Landström B, et al: Working behaviour of competent general practitioners: personal styles and deliberate strategies. *Scand J Prim Health Care* 2006, 24(2):122-128.

[38] Neighbour R. Primary care in the UK, and its role in the nation’s health. Health and Global Policy Institute, 2012.

[http://www.hgpi.org/handout/ver3%20RN%20HGPI%20breakfast%20presentation.pdf]

Table 1. Participants' characteristics, training, and practice.

	Total	Clinic without inpatient beds			Hospital		
	n = 147	n = 38			n = 109		
		Residents	Attending physicians		Residents	Attending physicians	
		n = 15	n = 23		n = 57	n = 52	
	(100.0%)	(10.2%)	(15.6%)		(38.8%)	(35.4%)	
	n (%)	n (%)	n (%)	p-value	n (%)	n (%)	p-value
Sex (women)	27 (18.4)	4 (26.7)	4 (17.4)	0.63	13 (22.8)	6 (11.5)	0.13
Missing	0 (0)	0 (0)	0 (0)		0 (0)	0 (0)	
Training time period				0.01*			<0.01*
Internship	54 (36.7)	2 (13.3)	10 (43.5)		24 (42.1)	18 (34.6)	
Family medicine residency	46 (31.3)	9 (60.0)	6 (26.1)		25 (43.9)	6 (11.5)	
Other residency	18 (12.2)	0 (0.0)	2 (8.7)		2 (3.5)	14 (26.9)	
Other	16 (10.9)	1 (6.7)	3 (13.0)		1 (1.8)	11 (21.2)	
Missing	13 (8.9)	3 (20.0)	2 (8.7)		5 (8.7)	3 (5.8)	
Training setting				0.03*			0.74
Clinic without inpatient beds	28 (19.0)	9 (60.0)	6 (26.1)		8 (14.0)	5 (9.6)	
Clinic with inpatient beds	1 (0.7)	0 (0.0)	0 (0.0)		0 (0.0)	1 (1.9)	
Hospital	95 (64.6)	3 (20.0)	12 (52.2)		40 (70.2)	40 (76.9)	
Other	3 (2.0)	1 (6.7)	0 (0.0)		2 (3.5)	0 (0.0)	
Missing	20 (13.7)	2 (13.3)	5 (21.7)		7 (12.3)	6 (11.6)	
Access	Median (mode)	Median (mode)			Median (mode)		
High-level medical service agencies[a]	easy (very easy)	easy (easy)	easy (easy)	0.28	easy (very easy)	easy (very easy)	0.97
Specialists[a]	average (easy)	easy (easy)	average (easy)	0.96	average (average)	easy (easy)	0.38
	Mean ± SD	Mean ± SD			Mean ± SD		
Years after graduation from medical school	10.9±8.8	5.3 ± 2.2	15.9 ± 9.2	< 0.01*	4.7 ± 2.1	16.0 ± 9.1	< 0.01*
Units of duty per week†	3.6 ± 2.4	4.8 ± 2.6	5.5 ± 2.8	0.48	2.6 ± 2.0	3.4 ± 1.7	< 0.01*
Number of patients seen per unit	17.9 ± 10.4	12.0 ± 4.9	19.1 ± 10.9	0.05*	13.0 ± 7.0	23.3 ± 11.3	< 0.01*
Number of new cases seen per unit	5.7 ± 4.8	3.0 ± 1.8	3.1 ± 1.9	0.95	6.5 ± 4.1	6.6 ± 5.8	0.54
Consultation length for new cases (min)	20.7 ± 11.5	19.9 ± 8.3	18.2 ± 8.2	0.48	24.3 ± 13.6	17.7 ± 9.4	0.01*
Consultation length for follow-up cases (min)	10.0 ± 5.3	12.1 ± 4.7	10.1 ± 7.1	0.07	10.9 ± 5.9	8.4 ± 3.6	0.01*

*$p < 0.05$

[a]Possible answers were “very easy,” “easy,” “average,” “difficult,” and “very difficult.”

†One unit = approximately 3 h in the morning or afternoon.

Table 2. Concerns about patient care and consultation models.

	Total	Clinic without inpatients beds			Hospital		
		Residents	Attending physicians		Residents	Attending physicians	
	n = 147 (100.0%)	*n* =15 (10.2%)	*n* = 23 (15.6%)		*n* = 57 (38.8%)	*n* = 52 (35.4%)	
	n (%)	*n* (%)	*n* (%)	*p*-value	*n* (%)	*n* (%)	*p*-value
Creation of a patient-care approach	78 (53.1)	5 (33.3)	17 (73.9)	0.03*	34 (59.6)	22 (42.3)	0.15
Knowledge of Western models	59 (40.1)	11 (73.3)	13 (56.5)	0.55	12 (21.1)	23 (44.2)	0.04*
	Median (mode)	Median (mode)			Median (mode)		
Importance †	3 (3)	3 (3)	4 (3)	0.91	3 (3)	4 (3)	0.89
Confidence †	5 (5)	4 (4)	5 (4)	0.87	5 (5)	6 (3)	0.15
Perceived need for Japanese models[1]	3 (3)	4 (5)	4 (4)	0.86	3 (1)	3 (3)	1

*$p < 0.05$

† Expressed as the median (mode) of those who knew about Western models.

[1] "Japanese models" = consultation models based on the clinical situation in Japan. Participants indicated their need for Japanese models on a scale from 1 to

Table 3. Association between the need for Japanese models and participants' characteristics among residents in hospitals.

	Need for Japanese models[1]		
	High	Low	
	n = 42	n = 5	p -value
	n (%) or mean ± SD		
Units of duty per week †	*2.8 ± 2.3*	*2.0 ± 1.0*	0.58
Number of patients seen per unit †	*13.1 ± 7.0*	*11.0 ± 8.6*	0.43
Number of new cases seen per unit †	*6.7 ± 4.1*	*5.2 ± 4.8*	0.47
Consultation length for new cases (min)	*23.9 ± 12.9*	*23.8 ± 7.5*	0.65
Consultation length for follow-up cases (min)	*10.8 ± 6.4*	*10.6 ± 4.4*	0.88
Sex			0.32
Male	31 (73.8)	5 (100.0)	
Female	11 (26.2)	0 (0.0)	
Training time period			0.49
Internship	16 (38.1)	4 (80.0)	
Family medicine residency	19 (45.3)	1 (20.0)	
"Other" (other residency and other)	2 (4.8)	0 (0.0)	
Training setting			1
Clinic and other	9 (21.4)	1 (20.0)	
Hospital	27 (64.3)	4 (80.0)	
Creation of patient-care approach			0.09
Yes	29 (69.0)	1 (20.0)	
No	11 (26.2)	3 (60.0)	
Knowledge of Western models			0.31
Yes	12 (28.6)	0 (0.0)	
No	29 (69.0)	5 (100.0)	
	Median (mode)		
Importance ††	3 (3)	–	–
Confidence ††	5 (5)	–	–

*p -value < 0.05

†One unit = approximately 3 h in the morning or afternoon.

[1]"Japanese models" = consultation models based on the clinical situation in Japan. Participants indicated their need for Japanese models on a scale from 1 to 10 (1 = highest, 10 = lowest). Participants were divided into a high-need group (≤ 5) or low-need group (≥ 6).

†† Only those who knew about Western models were included.

Table 4. Association between the need for Japanese models and participants' characteristics among attending physicians in hospitals.

	Need for Japanese models[1]		
	High	Low	
	n = 40	*n* = 5	*p* -value
	n (%) or mean ± *SD*		
Units of duty per week †	*3.3 ± 1.6*	*2.6 ± 1.1*	0.39
Number of patients seen per unit †	*22.8 ± 11.0*	*20.4 ± 12.0*	0.96
Number of new cases seen per unit †	*6.1 ± 4.7*	*10.3 ± 11.6*	0.64
Consultation length for new cases (min)	*18.2 ± 9.1*	*15.4 ± 10.5*	0.64
Consultation length for follow-up cases (min)	*8.4 ± 3.5*	*8.9 ± 4.7*	0.64
Sex			1
Male	35 (87.5)	5 (100.0)	
Female	5 (12.5)	0 (0.0)	
Training time period			1
Internship	13 (32.5)	2 (40.0)	
Family medicine residency	6 (15.0)	0 (0.0)	
"Other" (other residency and other)	20 (50.0)	3 (60.0)	
Training setting			0.48
Clinic and other	5 (12.5)	1 (20.0)	
Hospital	32 (80.0)	3 (60.0)	
Creation of patient-care approach			1
Yes	18 (45.0)	2 (40.0)	
No	19 (47.5)	3 (60.0)	
Knowledge of Western models			0.35
Yes	20 (50.0)	1 (20.0)	
No	20 (50.0)	4 (80.0)	
	Median (mode)		
Importance ††	3.5 (3)	7 (7)	0.48
Confidence ††	5.5 (3)	7 (7)	0.38

*p -value < 0.05.

†One unit = approximately 3 h in the morning or afternoon.

[1]"Japanese models" mean consultation models based on the clinical situation in Japan. Participants indicated their need for Japanese models on a scale from 1 to 10 (1 = highest, 10 = lowest). Participants were divided into a high-need group (≤ 5) or low- need group (≥ 6).

†† Only those who knew about Western models were included.