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Author(s)

Hisanaga, R; Takahashi, T; Sato, T; Yotsuya, M; Shinya, A; Miyake, N

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Status of Clinical Training at Tokyo Dental College and Subsequent Career Pathway
— Focusing on Training Facilities and Programs —

Ryuichi Hisanaga1, Toshiyuki Takahashi2, Toru Sato3, Mamoru Yotsuya3, Akimasa Shinya1 and Nahoko Miyake4

1) Department of Fixed Prosthodontics, Tokyo Dental College, 1-2-2 Masago, Mihama-ku, Chiba 261-8502, Japan
2) Division of General Dentistry, Tokyo Dental College, 1-2-2 Masago, Mihama-ku, Chiba 261-8502, Japan
3) Department of Fixed Prosthodontics, Tokyo Dental College, 2-9-18 Misaki-cho, Chiyoda-ku, Tokyo 101-0061, Japan
4) Department of Removable Partial Prosthodontics, Tokyo Dental College, 2-9-18 Misaki-cho, Chiyoda-ku, Tokyo 101-0061, Japan

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Abstract

The goal of the present study was to clarify the status of training in clinical dentistry at training facilities belonging to Tokyo Dental College by investigating trainee quota fill rates and analyzing the relationship between selection of training program and subsequent career pathway. The trainees were divided into 4 groups based on career pathway after training: those entering graduate school; those becoming residents; those remaining at the college or hospital to take specialized clinical courses or for other purposes; and those starting work outside the college. The trainee quota fill rate was highest at the Suidobashi Hospital, followed by the Ichikawa General and Chiba Hospitals. A total of 8 training programs have been implemented at these facilities (Chiba: A, B, C, and D; Suidobashi, A, B, and C; and Ichikawa, A). A comparison among training programs revealed that the fill rate exceeded 60% in all cases, except for Chiba D, where it was markedly lower, at 25%. Career pathway after training significantly varied between training facilities. Among trainees selecting the Chiba Hospital, the highest proportion was occupied by those starting work outside the college. The proportion of those entering graduate school was also high in this group. Similarly, among trainees selecting the Suidobashi Hospital, the highest proportion was occupied by those starting work outside the college. The proportion of those entering graduate school was low in this group, however. Among trainees selecting the Ichikawa General Hospital, the proportions of those entering graduate school and those becoming residents were particularly high, while the proportion of those starting work outside the college was low. A comparison of career pathways revealed a significant difference only between Chiba Programs B and C. In conclusion, training facility showed a markedly stronger influence on career pathway than training program.

Key words: Clinical dental trainees — Training facilities — Training programs — Status of training — Career pathway
**Introduction**

Training in clinical dentistry is provided at all 3 facilities belonging to Tokyo Dental College (Chiba and Suidobashi branches and Ichikawa General Hospital). Each of these facilities offers a unique program constructed in line with the guidelines laid down in the Dentists Act. The Chiba branch is a community-based hospital located in Chiba City in Chiba Prefecture, while the Suidobashi branch is an urban hospital located in Chiyoda Ward in Tokyo. The Ichikawa General Hospital, which is located in Ichikawa City in Chiba Prefecture, offers both dental and medical treatment. In earlier studies by this group, we reported on the status of dental services provided by clinical dental trainees; approaches to improving initial training; cooperative clinical training facilities; specialized training; intra-group matching; dental trainees trends; and their career pathways after training.

The purpose of the present study was to clarify the status of training in clinical dentistry since such courses became compulsory by investigating trainee quota fill rates at training facilities belonging to Tokyo Dental College and analyzing the relationship between selection of training program and subsequent career pathway.

**Methods**

A total of 8 training programs have been implemented at the 3 Tokyo Dental College facilities (Chiba: A, B, C, and D; Suidobashi: A, B, and C; and Ichikawa: A). Suidobashi Program C, however, was only used in 2006 and 2007. To enable trainees to receive training at 1 to 3 facilities within 1 year, each program is divided into 3 periods. The content of each program is as follows: Chiba Program A, Department of General Consultation and Treatment and 2 specialized medical departments; Chiba Program B, Department of General Consultation and Treatment, specialized medical departments, and an external facility; Chiba Program C, Department of General Consultation and Treatment and 2 external facilities; Chiba Program D, Department of General Consultation and Treatment and an external facility (2-period); Suidobashi Program A, Department of General Consultation and Treatment (2-period) and specialized medical departments; Suidobashi Program B, Department of General Consultation and Treatment, specialized medical departments, and an external facility; Suidobashi Program C, Department of General Consultation and Treatment and 2 external facilities; and Ichikawa Program A, specialized medical departments (3-period) (Table 1). The study involved 702 clinical dental trainees belonging to Tokyo Dental College between 2006 and 2011 after clinical training courses for dental students became compulsory.

First, the number of trainees and quota fill rate at each facility for each program were determined. The trainees were then divided into 4 groups as follows based on career pathway after training to investigate its relationship with the facility/program selected: those who entered graduate school (graduate-school group); those who became a resident (resident group); those who remained at the college or hospital to take specialized clinical courses or for other purposes (specialized-course group); and those who started work outside the college (out-of-college group).

Differences in proportions were evaluated using a chi-squared test. When any cell in the contingency tables showed a value of less than 5, the Fisher’s exact test was carried out.

**Results**

The number of trainees at each training facility was as follows (Table 2): Chiba: 558; Suidobashi: 97; and Ichikawa: 47. The trainee quota fill rate was highest at the Suidobashi Hospital, at 88%, followed by the Ichikawa General Hospital, at 81%, and Chiba Hospital, at 73%. The Chiba Program D showed a markedly lower fill rate than the other programs, at 25% (Table 3).
A chi-squared test with Bonferroni correction revealed significant differences in the career pathway after training between each of the 3 facilities (Table 4 and Fig. 1). Among trainees selecting the Chiba Hospital, out-of-college group members accounted for the majority, at 50%, and the proportion of graduate-school group members was also high, at 24%. Among trainees selecting the Suido-bashi Hospital, the out-of-college group made up the majority, at 49%, while the proportion of graduate-school group members was as low

| Site of training based on each program |
|---------------------------------------|
| Internal Department of General Consultation and Treatment | Internal Department of Specialized Consultation and Treatment | External facility |
| Chiba A | ○ | ○○ | |
| Chiba B | ○ | ○ | ○ |
| Chiba C | ○ | ○○ | |
| Chiba D | ○ | ○ (2-period) | |
| Suido-bashi A | ○ (2-period) | ○ | |
| Suido-bashi B | ○ | ○ | ○ |
| Suido-bashi C | ○ | ○○ | |
| Ichikawa A | ○ (3-period) | | |

| Comparison of number of trainees and quota fill rate among training facilities |
|---------------------------------|
| Quota (person: fixed annual number of trainees) | Number of trainees (persons) | Fill rate (%) |
| Chiba Hospital | 768 (128) | 558 | 73 |
| Suido-bashi Hospital | 110 (15–20) | 97 | 88 |
| Ichikawa General Hospital | 58 (8–12) | 47 | 81 |

| Comparison of number of trainees and quota fill rate among programs |
|---------------------------------|
| Quota (person: fixed annual number of trainees) | Number of trainees (persons) | Fill rate (%) |
| Chiba A | 190 (30–32) | 115 | 61 |
| Chiba B | 174 (24–30) | 151 | 87 |
| Chiba C | 396 (66) | 290 | 73 |
| Chiba D | 8 (8) | 2 | 25 |
| Suido-bashi A | 44 (5–10) | 39 | 89 |
| Suido-bashi B | 56 (8–10) | 49 | 88 |
| Suido-bashi C | 10 (5) | 9 | 90 |
| Ichikawa A | 58 (8–12) | 47 | 81 |
as 8%. Among trainees selecting the Ichikawa General Hospital, the proportions of graduate-school and resident group members were particularly high, at 36 and 43%, respectively, compared with the other training facilities, while the proportion of out-of-college group members was markedly low, at 21%.

The career pathway was also compared among training programs (Table 5 and Fig. 2). Out-of-college group members accounted for the majority among trainees selecting Chiba Programs A–C, at 38 to 58%; the proportions of graduate-school and specialized-course group members were similar, at 22 to 29% and 16 to 32%, respectively, while the resident group showed the lowest proportion, at 4 to 5%. Among trainees selecting Suidobashi Programs A–C, the out-of-college group made up the majority, at 47 to 67%, followed by the specialized-course, at 11 to 38%, graduate-school, at 3 to 12%, and resident group, at 8 to 11%. More students in the resident group selected Suidobashi Program A than in the graduate-school group, while this was the reverse for Suidobashi Program B. As Suidobashi Program C was only used in 2006 and 2007, the numbers of trainees selecting it were limited, although it showed a similar tendency to Suidobashi Programs A and B. The highest proportion selecting Ichikawa Program A was in the resident group, at 43%, followed by graduate-school and out-of-college group members, at 36 and 21%, respectively. The Ichikawa Program showed a lower proportion of out-of-college group members in the absence of specialized-course members than the Chiba or Suidobashi programs. A chi-squared test to compare career pathways among the 8 training programs revealed a significant difference only between Chiba Programs B and C.

**Discussion**

In addition to their educational and treatment activities, the 3 facilities of Tokyo Dental College also function as clinical training facili-
ties. Between 2006 and 2011, after clinical training courses for dental students became compulsory, a total of 702 dental trainees were accepted at these facilities. Until 2011, most clinical training was conducted at the Chiba Campus. In 2012, however, this changed, with most clinical education being shifted to the Suidobashi Campus, as was student education. Even so, all 3 facilities accept a large number of dental trainees every year onto the various unique training programs offered.

The focus in the present study, was on the 6-year period spanning 2006 to 2011, during which the main function of the college was still being assumed by the Chiba Campus.

A comparison of trainee number revealed that a markedly higher proportion were enrolled at the Chiba Hospital (Chiba Campus) than at the other facilities; its trainee quota fill rate, however was the lowest, at 73%.

|                | Graduate-school | Resident | Specialized-course | Out-of-college |
|----------------|-----------------|----------|--------------------|----------------|
| Chiba A        | 33 (29)         | 5 (4)    | 24 (21)            | 53 (46)        |
| Chiba B        | 37 (25)         | 8 (5)    | 49 (32)            | 57 (38)        |
| Chiba C        | 65 (22)         | 13 (4)   | 45 (16)            | 167 (58)       |
| Chiba D        | 0 (0)           | 0 (0)    | 0 (0)              | 2 (100)        |
| Suidobashi A   | 1 (3)           | 4 (10)   | 15 (38)            | 19 (49)        |
| Suidobashi B   | 6 (12)          | 4 (8)    | 16 (33)            | 23 (47)        |
| Suidobashi C   | 1 (11)          | 1 (11)   | 1 (11)             | 6 (67)         |
| Ichikawa A     | 17 (36)         | 20 (43)  | 0 (0)              | 10 (21)        |

Unit: person (%)
This was because the quota had been set high to ensure availability of training for all graduates of Tokyo Dental College.

Among the training programs, Chiba Program D, which consists of 2 periods of training to be provided at the same external facility, showed a particularly low quota fill rate of 25%. This may be because those wishing to undergo 2 periods of training want to do so at 2 different facilities, in which case they would be more likely to select Chiba Program C.

Focusing on training facilities, the out-of-college group made up the majority selecting the Chiba Hospital, followed by the graduate-school and specialized-course groups, which showed similar proportions, while the resident group showed the lowest proportion. Trainees who select this hospital for training tend to be clinically-oriented, and are aiming to become practitioners. In addition, those with an interest in research activities may also have selected this hospital as both education and research were centered at this campus at that time. In contrast, among trainees selecting the Suidobashi Hospital, the proportions of external and specialized-course group members were higher than those of graduate-school or resident group members. This may be explained as follows: the Suidobashi Hospital is located in the center of Tokyo, and is visited by a large number of patients with diseases that are rarely dealt with by general practitioners, ensuring that trainees can encounter diverse cases. Therefore, those selecting this hospital for training usually wish to become practitioners, and so are likely to be clinically, rather than research-oriented. Based on these results, the career pathways of those trained at the Chiba and Suidobashi Hospitals may have been markedly influenced by the characteristics of those facilities\(^3\). In contrast, the career pathways of those trained at the Ichikawa General Hospital showed a clearly different tendency: the proportions of graduate-school and resident group members selecting this hospital were markedly higher, while the proportion of out-of-college group members was significantly lower. Training at the Ichikawa General Hospital is focused on medicine, which means that dental trainees are more likely to encounter a wide range of approaches to oral surgery. Therefore, those selecting this hospital may have wished to remain at the same facility to continuously improve their skills, even after completing a 1-year training program.

Focusing on program selection, significant differences were observed only between Chiba Programs B and C, possibly due to the high proportion of out-of-college group members selecting the latter. Chiba Program B enables students to receive training at the Department of General Consultation and Treatment, specialized medical departments, and an external facility, and those selecting it tended to adopt broad perspectives and consider a wide range of choices for their career pathways, rather than exclusively seeking employment at external institutions. In contrast, Chiba Program C is a program for training at the Department of General Consultation and Treatment and 2 external facilities. As it enables students to receive training at 2 external training facilities, those selecting it are likely to have been clinically-oriented, resulting in the high proportion of out-of-college group members. On the other hand, in the case of Chiba Program A, which enables students to receive training at 2 specialized medical departments, the proportion of out-of-college group members was lower than that in the case of Chiba Program C, but still relatively high, despite the exclusion of clinical training facilities. In short, no significant difference was observed between Chiba Programs A and C. This may be explained by the high proportion of those aiming to work outside the college after experiencing various departments at a single hospital within a 1-year training period among students selecting the former. Suzuki et al.\(^3\) investigated career pathways after training in dental trainees from Okayama University and reported that approximately 60% of those selecting an independent training program remained at the university, while more than 70% of those selecting a combined training
program became a practitioner, indicating that dental trainees select training programs in consideration of their subsequent career pathway. Conversely, in the present study, the career pathway after training was influenced more markedly by training facility than by program.

The main functions of Tokyo Dental College will be shifted completely from the Chiba to the Suidobashi Campus in 2016, so such trends are likely to change in the future. All clinical dental trainees graduating from Tokyo Dental College and receiving training by 2018 will have been admitted to and educated at the Chiba Campus. However, all those receiving training in 2018 will have been educated at the Suidobashi Campus throughout their school life. This suggests that a number of factors must be considered in further developing training programs tailored to the specific needs of each clinical dental trainee, such as number of patients, range and type of conditions likely to be encountered, location, and career pathway. Further studies will be conducted to investigate trends in selection as a basis for the development of more appropriate and satisfactory training programs.

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Correspondence:
Dr. Ryuichi Hisanaga
Department of Fixed Prosthodontics,
Tokyo Dental College,
1-2-2 Masago, Mihama-ku,
Chiba 261-8502, Japan
E-mail: hisanaga@tdc.ac.jp