

# Investigating the Potential for Students to Provide Dental Services in Community Settings

- Linda Huynh-Vo, DDS •
- Joel M. Rosenbloom, BSc, DDS •
- Garry Aslanyan, DMD, MPH •
- James L. Leake, DDS, DDPH, MSc, FRCD(C) •

## A b s t r a c t

Some dental educational institutions in North America have incorporated community-oriented programs into their curriculum. The purpose of this study was to investigate the potential for the clinical placement of Ontario's dental and dental hygiene students in community-based settings. Key informant interviews were used to collect data. The study group consisted of 15 key informants from 9 potential placement sites and 4 educational institutions in Toronto and London, Ontario. The textual data were analyzed qualitatively to identify important issues regarding a clinical placement program. Results showed that there is strong support for the placement of students in community-based clinics; however, the degree to which health centres can accommodate students varies. The majority would not set any limit on the types of dental services that students could provide as long as the services were within the students' competencies. Funding was identified as a barrier to the implementation of such a program, with most of the organizations not able to contribute financially. None would be able to provide sufficient supervision without additional funding. These results indicate that a clinical placement program would be a welcome addition to the training of dental and dental hygiene students, but that external funding for supervision and operational expenses must be available before a program can be instituted.

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Some dental educational institutions in North America have incorporated community-oriented service learning into their curriculum.<sup>1-3</sup> The purpose of the present study was to investigate the potential for developing a program that would allow dental and dental hygiene students in Ontario to provide dental services in community-based clinics.

These clinical placement programs have never been fully explored in Ontario, despite recommendations that have been made by several recent reports and studies. One finding from the report *An Assessment of Oral Health Needs of the Community Served by West Central Community Health Centres* stressed the importance of collaboration between health centres and dental educational institutions in order to provide students with opportunities to work with socially isolated and marginalized communities.<sup>4</sup> The report from

the Homelessness Action Task Force to the Mayor of Toronto recommended the development of a pilot dental care project for homeless people in which dental and dental hygiene students would provide dental services in selected community health centres in Toronto.<sup>5</sup> And finally, a report from the United States Institute of Medicine strongly encouraged the expansion of dental education outside of routine dental school settings.<sup>6</sup>

## Methods

We adopted a qualitative methodology of key informant interviews. The study was approved by the Ethics Committee of the University of Toronto. Qualitative studies are becoming increasingly common in medical and dental research in North America and internationally.<sup>7-9</sup> The qualitative method is ideal for exploratory research for several

reasons. Most importantly, it provides the researcher with a broad perspective on issues.<sup>10</sup> It offers an opportunity to explore the perceptions, experiences and knowledge of key informants. The analysis of qualitative research is guided by questions and a search for patterns rather than by a strict hypothesis.<sup>11,12</sup>

Two instruments with open-ended questions were used: one for key informants in community health centres and public health agencies, and one for those in educational institutions. Both instruments closely followed recommended questionnaire design methodology.<sup>13</sup> Key informants were asked about their attitudes and opinions regarding certain aspects of a potential clinical placement program. Participants were selected based on their position as decision-makers in their organization.

The sampling of key informants in this study was based on established guidelines.<sup>14</sup> Both existing dental schools in Ontario (the University of Toronto and the University of Western Ontario in London) were included in the study. Because of logistical constraints, only 2 of the existing 10 dental hygiene programs in Ontario (George Brown College in Toronto and Fanshawe College in London) were chosen. These 2 programs were selected because of their proximity to the dental schools. Community health centres and public health agencies were chosen if they had a dental clinic or had taken steps in developing a dental program (for example, had designated space for a future dental clinic or requested funding from provincial government). They also had to be located within a reasonable distance from a dental educational institution.

One interviewer conducted all key informant interviews. Unless the participants refused, the interviews were audio-taped; otherwise, field notes were taken. The audiotapes and the field notes were compared for potential bias. A standard procedure for transcribing, note taking, coding and data management was utilized.<sup>15</sup> The textual data obtained from all the interviews were analyzed under separate themes, which is a common practice of qualitative data analysis.<sup>16</sup> The themes represented the most salient issues in the development of a clinical placement program. The 6 themes identified were analyzed for a general pattern of response. After comparing and matching responses, the general consensus found under each theme was reported. Any additional information departing from the general response was then specified.

## Results

Fifteen interviews were conducted with participants from 9 potential placement sites (8 in Toronto and one in London) and 4 educational institutions (2 in Toronto and 2 in London). Ten informants were from placement sites and 5 were from educational institutions. Twelve informants allowed their interview to be audiotaped, while 3 refused.

Comparison of the taped and non-taped results showed no difference.

The following results of the interviews are grouped under 6 themes, with direct quotations from the participants.

### *Suitability of Students to Provide Dental Services*

Most of the participants interviewed were in favour of having students provide dental services at community-based clinics: *"This is a good opportunity for hygiene and dental students to see the kind of population that they won't see either in dental school or in private practice."*

Another common reason mentioned in support of clinical placements was the high level of unmet dental needs, especially among marginalized and low-income populations: *"Dental health is a huge issue in this community. We have always felt very dissatisfied about the resources we have to deal with that."*

Despite the overall supportive attitude, several key informants pointed out some drawbacks to clinical student placements. One mentioned that there was a cost attached to having students at a placement site because in such cases *"facilities are tied up and productivity is low."* Also, there was concern about who would be responsible for the continuing care of the patients once students leave their placement sites.

### *Ability to Accommodate Students*

The community health centres and public health units that have dental facilities indicated that along with supervising students they still need to ensure the daily functioning of their clinics: *"Although we want to provide support to the teaching institutions, we have a mandate to provide as much treatment as possible to high-risk [groups] ... We have to maintain a certain level of productivity for the very high salaries of our professionals."*

Key informants representing the schools were willing to grant credits for work done in community clinics. One issue that arose, however, was determining *"which department takes ownership of the program"* before credits can be granted.

Two key informants suggested making the placement program *"a mandatory program — [the students] would do it as part of their training,"* their reasoning being that *"if you think this kind of exposure is important, you don't make it voluntary — you make it mandatory so students can't opt out."*

There were mixed responses regarding whether a summer or an all-year rotating program was preferred. From the perspective of the educational institutions, an all-year program seems to be more feasible because of liability issues: *"Students that choose to do [summer] electives pose a difficulty for the university because we have to find a way to have them continue to be registered in the program. If they're not registered students, our university is not able to manage them in terms of liability."*

### **Availability of Student Supervisors**

Key informants from placement sites reported that they “would feel much more comfortable if there were some supervision provided by the school” because they did not have dental staff with teaching experience. For some, the general concern seems to be that “if we have staff supervise, it does take away from their productivity.” Thus, the consensus among key informants of placement sites was that “in terms of human resources, if the expectation was that we would provide the staff to provide student supervision, then we could not do that.”

### **Range of Services Provided by Students**

There was a general consensus that “under proper supervision, students could provide whatever services they provide at dental schools.” Key informants from the schools identified that students would be able to provide clinical services consistent with their year of study. For example, third-year dental students should be able to provide restorative, endodontic and prosthodontic procedures.

In addition to clinical services, some key informants suggested that students would also benefit from participating in dental outreach services and health promotion activities: “There should be an opportunity for students to go into the community and do more health promotion or ‘on-the-spot’ consultations or advice ... [and participate in] other projects like developing health education materials or setting up policies.”

### **Financial Issues**

Key informants had difficulty providing accurate cost estimates of the program being proposed. However, the majority of key informants from the placement sites stated that their organization was “not in a financial position to put any money in a program like this.”

Informants from educational institutions consistently acknowledged that they could not make significant financial contributions “unless the program in turn saved the faculty some money in another direction, in which case the school could transfer the funds we saved back to the program.”

### **General Expectations of the Students**

In general, the key informants stated that the “expectation of the students is that they would provide the best care ... and take advantage of every opportunity to learn.” Overall, there was a genuine desire “to increase the chance that patients in public dental clinics will be served better by graduates.”

### **Discussion**

This study, the first of its kind in Ontario, shows there is both an interest and a need for community-based education. The study identified the issues that should be considered before a successful service-learning program can be set up. Although the study does make recommendations, it lacks enough evidence for a set of specific solutions. If a further

study were to be considered, it should include an assessment of organizations that have experience with service learning.

Several themes emerged from the analysis. Student supervision was a significant issue. None of the organizations was able to take on a supervisory role, the underlying reason being the financial burden associated with this responsibility. In other words, the problem is not the lack of desire to supervise, but a lack of funding. Therefore, for clinical placements to be feasible, financial support must be available to enable the placement site or the educational institution to provide adequate supervision. This confirms the need for public or private funding for such programs.

One possible arrangement for supervision would be for the educational institution to send clinical supervisors to the placement site with the students. This would ensure that students are trained in a manner consistent with that of the academic home. The drawback, however, is the high cost associated with having one supervisor for only one or 2 students.

An alternative arrangement is for staff at the placement site to provide supervision. These staff can undergo the same training orientation offered by the educational institutions to their teaching staff. The disadvantage of having staff of the placement site supervise students is that time is taken away from treating patients, therefore decreasing productivity.

There was no clear agreement on whether a summer or an all-year placement program would be more appropriate. The lack of consensus may be because the choice depends on a number of interrelated factors. An important factor is the availability of funding. It is not clear which program would cost more. Expenses for supplies and supervision might be the same for both programs since the amount of time that students spend at the placement site throughout the year (on a part-time basis) would be about the same as the time spent only in the summer (on a full-time basis). Similarly, there is no clear information on the administrative costs of a summer versus a full-year program. While an all-year program requires administrative efforts to schedule students through rotations at different places, summer placements would also entail administrative work in selecting students and arranging for liability coverage.

One potential area of difference is remuneration. Students working at placement sites during the summer would have to be paid. This cost would not apply to the all-year program, since students rotating at placement sites during school hours would not require compensation. The extra expense associated with summer placements may be a disincentive for a summer program.

The choice between a summer and a year-round program also depends on whether the program would be elective or mandatory. If off-site clinical placements are mandatory, then a summer program would be impractical because not

all students would be available. On the other hand, an elective program might work better as a summer program, since an all-year elective program would be more disruptive for participating students because they would be absent from school during placements and might be deprived of the same learning opportunities as their peers. The deciding factor comes down to the importance that each educational institution places on exposing students to dentistry in community settings. If schools give this experience a high priority, then the program would be mandatory and curriculum changes would be made to accommodate all-year placements. If this type of program is given low priority, then the decision may be to minimize changes by offering it only as an elective summer program.

Another necessity of a placement program is the existence of a mutually supportive relationship between the placement site and the educational institution. This is confirmed by the Macy project,<sup>17</sup> which points out that schools sending students to community sites must have written affiliation agreements with the sites. Specifically, "schools should establish the educational, staffing, quality, and financial parameters under which dentist managers operate." Key issues must be clearly defined and each organization must have a clear understanding of its role in the program. More importantly, there must be a means for staff of the placement site and the school to exchange ideas and to be kept up to date with each other's progress. Effective information systems are critically important in managing programs and improving their clinical, educational and financial performance.

## Conclusion

A clinical placement program in community health settings would be a welcome addition to the training of dental and dental hygiene students of Ontario. The first and most important step in developing such a program is to obtain financial support. Once a sound financial base exists, decisions regarding specific program characteristics can be made. The key issues identified in this study include: choosing between a summer and a year-long program; deciding which organization will be responsible for student supervision; determining the types of services that students can provide; deciding whether to allocate credits for the placements; and defining the nature of the relationship between the placement site and the educational institution. ♦

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*Dr. Huynh-Vo* is a dentist practising in Toronto, Ontario.

*Dr. Rosenbloom* is a dental manager with the Toronto Public Health Department.

*Dr. Aslanyan* is a senior health advisor at the Policy Branch of the Canadian International Development Agency and a doctoral candidate in health policy in the faculty of dentistry, University of Toronto.

*Dr. Leake* is a professor and head of community dentistry in the department of biological and diagnostic sciences, faculty of dentistry, University of Toronto.

*Correspondence to:* Dr. James L. Leake, Department of Diagnostic and Biological Sciences, Faculty of Dentistry, University of Toronto, Toronto, ON M5G 1G6. E-mail: james.leake@utoronto.ca.

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