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Dental Public Health

Community Health Project Report 2014

Dental Tourism in Hong Kong: Perils or Pearls?
DENTAL PUBLIC HEALTH 2014

Dental Tourism in Hong Kong: Perils or Pearls?

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1.0 ABSTRACT

**Background:** Medical tourism is a growing phenomenon globally. In Hong Kong, the mainland China market is important for all types of industries, including healthcare.

**Objectives:** To determine current utilization of private dental care services in Hong Kong by mainland Chinese visitors ('in-bound' dental tourism); and to assess attitudes of private dentists towards dental tourism, and their willingness to promote it.

**Methods:** A cross-sectional postal survey was conducted among a random sample of 576 registered private dentists in Hong Kong. Participants reported on their current experience of ‘in-bound’ dental tourism (reasons for and logistical matters); their attitudes towards mainland China as a potential market; and their willingness to promote ‘in-bound’ dental tourism.

**Results:** The response rate to the survey was 34.7% (200/576). The majority of dentists (92.0%, 184) reported to treating patients from mainland China at their clinics. Most (56.0%, 112) perceived mainland Chinese patients as a potential market for their services and over a third (35.5%, 71) were willing to engage in promoting ‘in-bound’ dental tourism. ‘Quality’ of dental care was perceived as a key reason for dental tourism but continuity of care was problematic. Variations in the practice of and attitudes towards ‘in-bound’ dental tourism existed with respect to dentists backgrounds and qualifications.

**Conclusions:** Considerable ‘in-bound’ dental tourism from mainland China exists in Hong Kong; and the attitudes of private dentists in Hong Kong
towards it are positive. Findings have potential implications for dental manpower planning in Hong Kong (including dental specialists). Current arrangements warrant attention, particularly continuity of care and ensuring quality of services.
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2.0 INTRODUCTION

Medical tourism or ‘health tourism’ can be defined as the act of traveling to obtain treatment/medical care outside the local healthcare systems (Masoud et al., 2013). It is estimated that medical tourism is a US$1000 billion industry annually which this has rapidly expanded in the past decade and is expected to continue to do so (Deloitte Centre for Health Solutions, 2008). Medical tourism can be classified as ‘in-bound’ - traveling from other countries to receive treatment/medical care (Chen et al., 2010); ‘out-bound’ – traveling to other countries to receive treatment/medical care (Imison and Schweinsberg, 2013); and ‘intra-bound’ - traveling within a country to other states/provinces for treatment/medical care (Su et al., 2011). Dental and cosmetic procedures are key components of medical tourism and thus the growing interest in ‘dental tourism’, which has recently become a global phenomenon (Burke, 2007; Milosevic, 2009).

‘In-bound’ dental tourism has a long history, whereby economically affluent people from developing/non-industrialized countries have sought treatment/medical care in developed/industrialized countries because of the availability of specialized/high-end services; coupled with reported higher quality of services, and higher quality of trained and specialized healthcare personnel in developed/industrialized countries (Arends, 2011). In addition, to the concept of ‘diaspora’; where expatriates seek dental treatment back in their countries of origin, for a variety of reasons including familiarity with the local health care system has long existed (Martínez-Álvarez et al., 2011). Anecdotally and traditionally countries such as the USA, Canada, the United
Kingdom, Switzerland, Germany and the countries of Scandinavia have dominated such markets; albeit limited reports on such.

A more recent development has been ‘out-bound’ dental tourism. As the world becomes ever more interdependent and competitive; the spread of technologies, techniques and materials has enabled oral health care providers in developing/ non-industrialized countries to provide dental care at significant cost savings when compared with their peer health care providers in the industrialized / developed world (Osterle et al., 2009). In the Americas the major dental tourism countries are Mexico and Costa Rico; in Europe, Hungary is reported to be a key dental tourism destination (Osterle et al., 2009); in Asia, Thailand has had a long history of dental tourism and more recently India, Malaysia and Singapore have established as dental tourism sites (Turner, 2009); and in the Middle East countries like Saudi Arabia are rapidly expanding their potential for dental tourism (Krummenauer et al., 2003).

Undoubtedly the main motivation for dental tourism in developing/ non-industrialized countries is ‘costs’ – with savings of up to 70% reported (Osterle et al., 2009; Turner, 2009; Köberlein and Klingenerger, 2011). Dentists working in developing/ non-industrialized countries have much lower fixed (capital) costs, lower labour costs, lower operational costs, and lower insurance costs and thus it is feasible to provide oral health care services at a much lower cost to patients (Garg and Guez, 2011). The internet has become a significant source of information for dental tourism, and also in facilitating the logistics of dental tourism (Ní Ríordáin and McCreary, 2009). Coupled
with this there has been a rapid expansion in global travel associated with low cost air travel and a thus greater patient mobility. Furthermore, the attraction of a ‘vacation’ is an additional incentive that has also added to the growth of dental tourism (Kovacs and Szocska, 2013).

Access to dental care and services, particularly for treatments such as ‘dental implants’; which are often perceived as being financially ‘out of reach’ for many in the developed/ industrialized world have been made more affordable (Barrowman et al., 2010). Arguably greater access to care is an opportunity for public health (Vequist and Stackpole, 2012). However, there have been numerous concerns about ‘dental tourism’; both from the dental profession and the public themselves. Safety is a key concern, with numerous ethical and legal issues; including patient autonomy over practitioner choice, patient safety, continuity of care, informed consent and dentist-patient communication, among other factors (Kassim, 2009; Crooks et al., 2013; Conti et al., 2014). Quality of care is also of paramount importance with concerns about the training and skills of oral health care providers; cross infection control; after, follow-up and post treatment care (Burke, 2007; O’Connell and O’Sullivan, 2007; Osterle et al., 2009).

Hong Kong has had close economic partnership with the mainland of China for decades and trade between Hong Kong in all sectors of industry prevails; especially since the return of sovereignty in 1997 (Griffiths, 2008). In medicine, ‘transplant tourism’ (‘out-bound’ and ‘intra-bound’) has long been a recognised phenomenon for liver and kidney transplants; and not without concerns of safety and ethical issues (Biggins et al., 2009; Schiano and
Rhodes, 2010; Delmonico, 2012). More recently Hong Kong has experienced an influx of mothers from mainland China using obstetrics services; it is estimated that over one-third of children born in Hong Kong to mainland China mothers (Chung, 2007). This has resulted in considerable demands and strains on obstetric services and other health services in Hong Kong.

Dental tourism has also developed significantly in Hong Kong and mainland China. Prior to the return of sovereignty of Hong Kong to mainland China, it was estimated that 2% of adults in Hong Kong, according to an oral health survey of Hong Kong adults in 1984, received dental treatment in China (Lind et al., 1984). In 1989, a Community Health Project focusing on dental services for Hong Kong residents in Shenzhen (the neighboring and closest city) in mainland China; reported that major dental providers at the time (The Shenzen Dental Centre and The Shenzhen West China Stomatological Centre) claimed that up to 65% of their patients came from Hong Kong. A follow-up Community Health Project conducted in 1998, after the return of sovereignty of Hong Kong, reported continued expansion of dental services in Shenzhen; and notably in the private market (Lo et al., 1999). Interviews with patient groups observed that ‘costs’ remained the key reason for using dental services; and that there was an increase in the demand for more costly dental services such as orthodontics (Lo et al., 1999). Media and internet resources have reported a significant increase in dental tourism to mainland China, especially for dental implants (TechNavio, 2013).

In more recent times, the rapid economic growth in the mainland China coupled with travel restrictions between mainland Chinese and Hong Kong
being relaxed substantially, there has been an influx of mainland Chinese availing of a range of services in Hong Kong (Economic Analysis Division, Government Of The Hong Kong Special Administrative Region, 2014). In 2012, Hong Kong hosted an estimated 35 million mainland tourists – six times the entire population of Hong Kong and this has contributed significantly to the economic growth of the city (Liu Y, Global Times, 2014).

There is a dearth of information on how this large influx of mainland Chinese to Hong Kong is affecting dentistry, and our community health project sought to investigate this impact on the use and demand of dental services; and dentists’ perspectives of dental tourism as a potential growth market. Greater understanding of ‘in-bound’ dental tourism has implications for dentistry in Hong Kong, namely the demand on local services which ought to be considered in dental manpower planning. There is a need to understand what types of dental services are in demand which may have implications for specialist manpower planning. Identifying key reasons for dental tourism can provide an insight into the strengths of Hong Kong as a dental tourism destination. Quality and continuity of dental care are important to consider for patients’ safety and Hong Kong’s dentistry reputation. Understanding the logistics of dental tourism can identify the challenges dental care providers face in providing dental tourism and potentially training needs for the profession. Gaining an insight into dentists’ attitudes toward dental tourism can provide prospective of the potential growth of dental tourism in Hong Kong in the future to inform necessary planning of dental services.
3.0 AIMS and OBJECTIVES

The aims of this community health project were:

I. To determine current utilization of private dental services in HKSAR by mainland Chinese visitors; key reasons for the use of services; types of services sought; and the logistics surrounding provision of 'in-bound' dental tourism.

II. To determine attitudes of dental private practitioners in Hong Kong towards ‘in-bound’ dental tourism; the potential market of mainland Chinese patients; practitioners’ willingness to treat patients from mainland China; and their willingness to promote dental tourism in HKSAR.

III. To identify variations in ‘in-bound’ dental tourism practices and attitudes in Hong Kong with respect to dental practitioners backgrounds and qualifications.
4.0 METHODS and MATERIALS

4.1 Study Design and Study Sample

Our community health project was a cross-sectional survey among private dentists in Hong Kong. The sampling frame of the study was the list of registered dentists with the Hong Kong Dental Council (www.dchk.org.hk); which is a complete sampling frame of all dentists who are legally permitted to practice dentistry in Hong Kong. A one in three random sample was chosen using simple random number generation; yielding a selected sample size of 700 registered dentists. Contact information (address details) was obtained from the Hong Kong Dental Council and those with registered working address at government dental services were excluded (124 dentists). Government dental surgeons were excluded since dental services are only provided to Hong Kong residents. A final list of 576 dentists remained and their names and address were downloaded from the website of Hong Kong Dental Council.

4.2 Data Collection and Data Collection Instruments

The method of data collection was a postal survey with a questionnaire sent to dentists to self-complete; and a self-addressed envelope provided to return the questionnaires. Two waves of data collection were conducted. A first mailing was conducted in February 2014 with requested response by the end of March 2014. A second mailing was conducted in early April 2014 with a requested response by the end of April. No incentive for participation was provided.
The advantages of postal questionnaires are that large numbers of dentists can be surveyed in a relatively short time frame; that random and targeted samples of dentists can be surveyed in a large geographical area (the whole of Hong Kong); and that postal questionnaires are a relatively inexpensive way to collect survey data with minimal manpower requirements. Postal questionnaires also have advantages for participants in that the dentists can complete the survey as a suitable time for them (an important consideration for dentists with busy schedules); and that participants can take the time to reflect on questions being asked so as to provide more appropriate and valid responses. Another advantage of postal questionnaires is that anonymity can be maintained and avoids introducing social response biases (social desirability bias) as associated with face-to-face interviews. Disadvantages of postal questionnaires are that they often have a low response rate as often only those who are interested in the subject complete and return the questionnaires; there is no opportunity to clarify questions which may yield invalid responses; there is no control over how participants complete the questionnaires which can result in sections of questionnaires being incomplete which hampers data analyses; being anonymous it is not possible to follow-up non-respondents or to estimate the potential effect of non-response bias.

The questionnaire was developed considering three main attributes (Appendix 1). Firstly, current practice of ‘in-bound’ dental tourism: experience of treating mainland Chinese patients in their practice; the proportion of mainland Chinese patients that they treated; estimated income derived from treating mainland Chinese patients; type of dental services that mainland
Chinese patients seek; key reasons why mainland Chinese patients seek dental treatments in Hong Kong; arrangement in providing comprehensive and continuous dental care; and languages used in communicating with mainland Chinese patients. Secondly, attitudes of private dental practitioners in Hong Kong to ‘in-bound’ dental tourism: the perceived potential market of mainland Chinese patients for their practice; their willingness to treat mainland Chinese patients; difficulties in attracting patients from mainland China and other foreseeable logistic problems. Responses to the attitudinal items were rated on a 5-point Likert scale with responses ranging from ‘strongly agree’ to ‘strongly disagree’. In section three of the questionnaire, information on dentists background and qualifications were collected: age; gender; number of years practicing in Hong Kong; place of dental graduation; registered specialist status; and experiences in living overseas.

4.3 Data Analysis

The data was entered into the Statistical Package for Social Sciences (SPSS), version 22.0 (IBM Corporation, 2013). Frequency of responses to each individual item was produced to identify missing data and incorrect coding. Where errors in data entry were identified, the original questionnaires were checked and valid data codes were entered.

Descriptive statistic were produced in terms of percentage (%) and numbers (n) of dentists treating patients from mainland China; estimated percentage of patient flow contributed by patients from mainland China; estimated percentage of annual income contributed by patients from mainland
China; key reason as to why patients from mainland China decided to have their treatments in Hong Kong; logistics and problems of pre- and post-operative arrangements; and incentives offered to patients was determined. Type of dental treatments sought by mainland Chinese patients and details of appointment arrangements (number of dental appointment and duration of treatment), as well as languages of dentist-patient communication were determined.

Descriptive statistics (percentage and number) were produced in terms of dentists’ attitudes to ‘in-bound’ dental tourism: their perceptions of the potential market of mainland Chinese patients to their practice; their willingness to treat mainland Chinese patient in the future; and their willingness to promote dental tourism.

Variations in the practice of dental tourism and attitudes of the dentists to ‘in-bound’ dental tourism for mainland Chinese patients with respect to their background information (age, gender, years of practices, place of graduation, registered specialist status, overseas dental education and experience of living overseas) was determined using Chi-square tests ($\chi^2$ test) or Fisher’s exact test. Chi-square/ Fisher’s exact test are statistical tests applied to sets of categorical data to evaluate how likely it is that any observed difference in frequency between the sets arise by chance. It determines whether two or more observations across two independent populations are dependent on each other and implies association not causation. Fisher’s exact test is used when the expected values in any of the cells of a contingency table are below 5.
5.0 RESULTS

5.1 Response Rate and Profile of Participants

After the first round of mailing, 14 questionnaire surveys (2.4%) were returned because no valid dental practice existed at the address provided by the Dental Council of Hong Kong as being the registered place of dental practice. After a one-month period 165 questionnaires (28.6%) were received. Following the second mailing, within two weeks an additional 49 questionnaires were received producing an overall response rate of 34.7% (200/547).

The profile of the dentists who participated in the community health project is presented in Table 1. Most participants were male dentists (75.5%, 151) and were aged below fifty (69.5%, 139). Approximately three-quarters (75.5%, 151) had qualified as a dentist from the Faculty of Dentistry, HKU and most participants had practiced for more than 10 years in Hong Kong (71.0%, 142), and approximately one-fifth, 18.0% (36) were registered specialists with the Dental Council of Hong Kong. Approximately one-third (31.0%, 62) reported to have lived overseas before, and likewise approximately one-third (36.0%, 72) reported to have obtained dental qualification from overseas; one-in-five (20.5%, 41) reported to have practiced overseas before.
Table 1: Profile of dentist who participated in the survey

<table>
<thead>
<tr>
<th>Background Characteristics</th>
<th>% (number)</th>
</tr>
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<tbody>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>24.5 (49)</td>
</tr>
<tr>
<td>Male</td>
<td>75.5 (151)</td>
</tr>
<tr>
<td>Age</td>
<td></td>
</tr>
<tr>
<td>&lt;40</td>
<td>41.0 (82)</td>
</tr>
<tr>
<td>40-50</td>
<td>28.5 (57)</td>
</tr>
<tr>
<td>&gt;50</td>
<td>30.5 (61)</td>
</tr>
<tr>
<td>Qualified in HK</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>75.5 (151)</td>
</tr>
<tr>
<td>No</td>
<td>24.5 (49)</td>
</tr>
<tr>
<td>Years Practicing in HK</td>
<td></td>
</tr>
<tr>
<td>1-5</td>
<td>17.5 (35)</td>
</tr>
<tr>
<td>6-10</td>
<td>11.5 (23)</td>
</tr>
<tr>
<td>&gt;10</td>
<td>71.0 (142)</td>
</tr>
<tr>
<td>Registered HK Specialists</td>
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<tr>
<td>Yes</td>
<td>18.0 (36)</td>
</tr>
<tr>
<td>No</td>
<td>82.0 (164)</td>
</tr>
<tr>
<td>Lived overseas</td>
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<tr>
<td>Yes</td>
<td>31.0 (62)</td>
</tr>
<tr>
<td>No</td>
<td>69.0 (138)</td>
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<tr>
<td>Received dental education overseas</td>
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<tr>
<td>Yes</td>
<td>36.0 (72)</td>
</tr>
<tr>
<td>No</td>
<td>64.0 (128)</td>
</tr>
<tr>
<td>Practiced dentistry overseas before</td>
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</tr>
<tr>
<td>Yes</td>
<td>20.5 (41)</td>
</tr>
<tr>
<td>No</td>
<td>79.5 (159)</td>
</tr>
</tbody>
</table>
5.2 Practice of treating mainland Chinese patients in Hong Kong

The majority (92.0%, 184) of dentists reported to having treated patients from mainland China at their dental practices in Hong Kong. Most dentists reported (86%, 172) that mainland Chinese patients constituted ten percent or less of their patient pool. Thirteen percent (25) reported that mainland Chinese patients constituted more than ten per cent of their patient pool and 15% (30) claimed that treating mainland Chinese patients accounted for more than ten percent of their income.

Mostly patients from mainland China (51.5%, 103) sought routine dental care at their dental practice but there were specific demands for prosthetic treatment (50.5%, 101); endodontic treatment (44.5%, 89); oral surgery (31.0%, 62) and dental implants (30.0%, 60). Other dental treatments sought by mainland Chinese patients are presented in Figure 1.

Figure 1: Dental treatments sought by mainland Chinese patients
5.3 Key reasons why mainland Chinese patients seek care in Hong Kong

‘Quality’ of dental care was most frequently cited (77.0%, 154) as the ‘key’ reason why mainland Chinese patients sought dental care in Hong Kong, Figure 2. The experience of dentists in Hong Kong was cited by 11% (22) as the ‘key’ reason why mainland Chinese patients sought dental care in Hong Kong. The range of dental treatments available in Hong Kong was cited by 5.5% (11) as the ‘key’ reason why patients from mainland China sought dental care in Hong Kong. Only two dentists (1%) claimed ‘costs’ as the key reason for utilizing dental services in Hong Kong. Approximately, one-in-twenty (5.5%, 11) cited ‘other’ key reasons for use of dental services in Hong Kong; such as second opinions or because of dental emergencies which arose while visiting Hong Kong.

Figure 2: Key reason why mainland Chinese seek dental care in Hong Kong
5.4 Logistics and continuity of care for mainland Chinese patients

Most dentists (65.5%, 131) reported that mainland Chinese patients attended their practices because of ‘word-of-mouth’. Approximately a quarter of dentists claimed (27.0%, 54) that mainland Chinese patients were treated at their practice because they were ‘walk-ins’; without any prior knowledge of their practice. Information about their practice on the ‘internet’ was cited by one-in-twenty (5.5%, 11) as to how patients from mainland Chinese knew of their practice. Dentists also cited other reasons (2.0%, 4), such as referrals from medical colleagues as to why their mainland Chinese patients knew of their dental practice.

Arrangements by third-party agencies were infrequent: 3.0% (9) were approached by medical tourism agencies to provide dental care for patients from mainland China. The use of incentives or special offers to attract mainland Chinese patients was infrequently employed – lower costs (by one dentist) and special packages of care (by one dentist).

Most dentists (64%, 128) reported that their arrangements for dental care were such that it took several weeks or more to complete a course of treatment, Figure 3. Typically the dentists claimed (44.5%, 89) that they arranged three to four visits for patients from the mainland; and more than one-in-ten dentists (11.5%, 23) claimed they usually arranged eight or more dental appointments for their mainland Chinese dental patients.
Rarely did dentists (1%, 2) have the practice of arranging consultations to mainland Chinese patients prior to their arrival in Hong Kong. Likewise few dentists (1.5%, 3) made arrangements for after-care at clinics outside of Hong Kong. More than a third (36.5%, 73) of dentists reported that their mainland Chinese dental patients were reviewed or maintained following dental treatment at their clinics in Hong Kong. A minority of dentists (14%, 28) reported that they had a mechanism in place for patients from mainland China to provide feedback or respond to comments following treatment.
5.5 Language communication with mainland Chinese patients

A variety of languages were reported to be used by dentists in communicating with mainland Chinese dental patients, *Figure 4*. The majority of dentists (86.5%, 173) claimed they had used *Mandarin* when communicating with patients from mainland China. *Cantonese*, the local Hong Kong language was also widely reported to be used by dentists (60.5%, 121) in communicating with patients from the mainland. Approximately a quarter (26.5%, 53) reported using *English* to communicate with mainland Chinese patients. In a minority of cases (13.5%, 27) dentists communicated with their mainland Chinese patients through a translator/interpreter.

*Figure 4: Language* communication with mainland Chinese patients

![Graph showing language communication preferences]

*multiple responses possible*
5.6 Attitudes of Hong Kong dentists to dental tourism

Most dentists (56.0%, 112) perceived that patients from mainland China were a potential market/patient pool for their dental practice: 50.5% (101) ‘agreeing’ and 5.5% (11) ‘strongly agreeing’, Figure 5. Approximately a third (31.5%, 63) was neutral in their perception of the potential market mainland China patients held for their dental practice. A minority (12.5%, 25) was in disagreement (‘disagreeing’ or ‘strongly disagreeing’) that mainland Chinese patients were a potential market for their dental practice. Some 16% (32) of dentists perceived mainland Chinese patients as a better source of income for their clinic than local patients.

Figure 5: Attitudes towards mainland Chinese as a dental market
Most dentists (65.0%, 130) reported they would be willing to treat patients from mainland China in the near future if they had the opportunity: 45.5% (91) ‘agreeing’ and 19.5% (39) ‘strongly agreeing’ that would be if they had the opportunity, Figure 6. Approximately quarters (25.5%, 51) were neutral regarding their willingness to treat mainland Chinese patients. Most did not foresee difficulties in attracting mainland Chinese patients; with 19% (28) of dentist ‘agreeing’ that it was difficult to attract such patients and 4.0% (8) strongly agreeing that it was difficult to attract such patients.

*Figure 6: Willingness to treat mainland Chinese patients*
5.7 Perceived attitudes in difficulties with logistics of treating mainland Chinese patients

Approximately a third of dentists (33.0%, 66) perceived language difficulties in managing mainland Chinese patients; agreeing (27.5%, 55) or strongly agreeing (5.5%, 11) that it was an obstacle in providing care. Cultural differences were perceived by over a third of dentists (43.5%, 87) as a difficulty in providing care: 25% (50) ‘agreeing’ and 18.5% (37) ‘strongly agreeing’.

Difficulties in providing continual care to mainland Chinese patients were perceived by most dentists (53.5%, 107); 40.5% (81) agreeing and 13.0% (26) strongly agreeing; Figure 7.

Figure 7: Foreseeing difficulties in providing continuity of care
5.8 Willingness to promote dental tourism in Hong Kong

Over a third of dentists (35.5%, 71) who participated in the survey reported that would be willing in engage in promoting dental tourism in Hong Kong; 30% (60) ‘agreeing and 5.5% (11) ‘strongly agreeing’, *Figure 8*. A minority, 16.0%, 32 were unwilling; 10.5% (21) ‘disagreeing’ and 5.5% (11) ‘strongly disagreeing’. Approximately a half of the dentists (48.5%, 97) were neutral about promoting dental tourism.

*Figure 8: Willingness to promote dental tourism*
5.9 Variations in the practice of ‘in-bound’ dental tourism and dentists’ backgrounds

There were significant variations in the practice of ‘in-bound’ dental tourism with respect to the background of the dentists surveyed, Table 2. Dentists who practiced dentistry in Hong Kong for more than 5 years more frequently reported to treating mainland Chinese patients at their practice than dentists who reported practicing dentistry in Hong Kong for less than 5 years; 93.9% (155/165) versus 83.9% (29/35), p=0.04. In addition, dentists who had lived overseas more frequently reported to treating mainland Chinese patients at their dental practice in Hong Kong compared to dentists who had not lived overseas; 98.4% (61/62) versus 89.1% (123/138), p=0.03. There were no significant associations between gender, age, place of graduation or specialty status and the practice of ‘in-bound’ dental tourism, p>0.05.
Table 2: Variations in the practice of ‘in-bound’ dental tourism.

<table>
<thead>
<tr>
<th>Dentists Characteristics</th>
<th>Treated % (number)</th>
<th>Not treated % (number)</th>
<th>p-value*</th>
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<tr>
<td>Gender</td>
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<tr>
<td>Male</td>
<td>90.1 (136)</td>
<td>9.9 (15)</td>
<td>0.13</td>
</tr>
<tr>
<td>Female</td>
<td>98.0 (48)</td>
<td>2.0 (1)</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;40</td>
<td>87.8 (72)</td>
<td>12.2 (10)</td>
<td>0.11</td>
</tr>
<tr>
<td>40 and older</td>
<td>94.9 (112)</td>
<td>5.2 (6)</td>
<td></td>
</tr>
<tr>
<td>Years in Practice</td>
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<td></td>
<td></td>
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<tr>
<td>&lt;5</td>
<td>82.9 (29)</td>
<td>17.1 (6)</td>
<td>0.04</td>
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<tr>
<td>5 or more</td>
<td>93.9 (155)</td>
<td>6.1 (10)</td>
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<td>HKU graduate</td>
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<td>Yes</td>
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<td>9.3 (14)</td>
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<td>Specialist</td>
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<td></td>
</tr>
<tr>
<td>Yes</td>
<td>95.0 (38)</td>
<td>5.0 (2)</td>
<td>0.74</td>
</tr>
<tr>
<td>No</td>
<td>91.2 (146)</td>
<td>8.8 (14)</td>
<td></td>
</tr>
<tr>
<td>Lived oversees</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>98.4 (61)</td>
<td>1.6 (1)</td>
<td>0.03</td>
</tr>
<tr>
<td>No</td>
<td>89.1 (123)</td>
<td>10.9 (15)</td>
<td></td>
</tr>
</tbody>
</table>

*p-value derived from Fisher’s exact test
5.10 Variations in the attitudes towards dental tourism and dentists’ backgrounds

There were significant variations in attitudes towards dental tourism among the dentists surveyed, Table 3. Dentists who reported to practice for 5 years or less in Hong Kong more frequently agreed that mainland Chinese patients were a potential market for their practice/patient pool compared with dentists who practiced for more than 5 years; 74.3% (26/35) versus 52.1% (86/165), p=0.02. In addition, dentists who graduated outside Hong Kong more frequently agreed that mainland Chinese patients were a potential market for their practice/patient pool compared with dentists who had graduated in Hong Kong; 69.4% (34/49) versus 51.7% (78/151), p=0.03. There were no significant associations between gender, age, specialty status to experience living overseas and attitudes towards dental tourism among the dentists surveyed, p>0.05.
Table 3: Variations in perceptions of mainland Chinese as a potential patient market.

<table>
<thead>
<tr>
<th>Dentists Characteristics</th>
<th>Agree % (number)</th>
<th>Not-Agree % (number)</th>
<th>p-value*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>54.3 (82)</td>
<td>45.7 (69)</td>
<td>0.40</td>
</tr>
<tr>
<td>Female</td>
<td>61.2 (48)</td>
<td>38.8 (19)</td>
<td></td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;40</td>
<td>59.8 (49)</td>
<td>40.2 (33)</td>
<td>0.37</td>
</tr>
<tr>
<td>40 and older</td>
<td>53.4 (63)</td>
<td>46.6 (55)</td>
<td></td>
</tr>
<tr>
<td><strong>Years in Practice</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;5</td>
<td>74.3 (26)</td>
<td>25.7 (9)</td>
<td>0.02</td>
</tr>
<tr>
<td>5 or more</td>
<td>52.1 (86)</td>
<td>47.9 (79)</td>
<td></td>
</tr>
<tr>
<td><strong>HKU graduate</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>51.7 (78)</td>
<td>48.3 (73)</td>
<td>0.03</td>
</tr>
<tr>
<td>No</td>
<td>69.4 (34)</td>
<td>30.6 (15)</td>
<td></td>
</tr>
<tr>
<td><strong>Specialist</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>63.9 (23)</td>
<td>36.1 (13)</td>
<td>0.30</td>
</tr>
<tr>
<td>No</td>
<td>54.3 (89)</td>
<td>45.7 (75)</td>
<td></td>
</tr>
<tr>
<td><strong>Lived oversees</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>64.5 (40)</td>
<td>35.5 (22)</td>
<td>0.10</td>
</tr>
<tr>
<td>No</td>
<td>52.5 (72)</td>
<td>47.8 (65)</td>
<td></td>
</tr>
</tbody>
</table>

*p-value derived from Chi-square statistics
5.11 Variations in the attitudes to promoting dental tourism and dentists’ backgrounds

There were significant variations in attitudes to promoting ‘in-bound’ dental tourism among the dentists surveyed, Table 4. Registered specialist in Hong Kong more frequently agreed that they were willing to promote dental tourism than non-specialists; 55.6% (20/36) compared to 21.1% (51/164), P=0.01. There was no significant associations between gender, age, place of graduation, years in dental practice or experience of living overseas an willingness to promote ‘in-bound’ dental tourism, p>0.05.
Table 4: Variations in attitudes to promoting dental tourism.

<table>
<thead>
<tr>
<th>Dentists Characteristics</th>
<th>Agree % (number)</th>
<th>Not-Agree % (number)</th>
<th>p-value*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>35.1 (53)</td>
<td>64.9 (98)</td>
<td>0.84</td>
</tr>
<tr>
<td>Female</td>
<td>36.7 (18)</td>
<td>63.3 (31)</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;40</td>
<td>32.9 (27)</td>
<td>67.1 (55)</td>
<td>0.53</td>
</tr>
<tr>
<td>40 and older</td>
<td>37.4 (44)</td>
<td>62.7 (74)</td>
<td></td>
</tr>
<tr>
<td>Years in Practice</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;5</td>
<td>34.3 (12)</td>
<td>65.7 (23)</td>
<td>0.87</td>
</tr>
<tr>
<td>5 or more</td>
<td>35.8 (59)</td>
<td>64.2 (106)</td>
<td></td>
</tr>
<tr>
<td>HKU graduate</td>
<td></td>
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<tr>
<td>Yes</td>
<td>33.1 (50)</td>
<td>69.9 (101)</td>
<td>0.22</td>
</tr>
<tr>
<td>No</td>
<td>42.9 (21)</td>
<td>57.1 (28)</td>
<td></td>
</tr>
<tr>
<td>Specialist</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>55.6 (20)</td>
<td>44.4 (16)</td>
<td>0.01</td>
</tr>
<tr>
<td>No</td>
<td>31.1 (51)</td>
<td>68.9 (113)</td>
<td></td>
</tr>
<tr>
<td>Lived oversees</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>40.3 (25)</td>
<td>59.7 (37)</td>
<td>0.34</td>
</tr>
<tr>
<td>No</td>
<td>33.3 (46)</td>
<td>66.7 (92)</td>
<td></td>
</tr>
</tbody>
</table>

*p-value derived from Chi-square statistics
6.0 DISCUSSION

6.1 Response rate and profile of the study population

The response rate to the postal survey was relatively low with just over one-third of the 576 randomly selected dentists in Hong Kong participating in our community health project. A small proportion (~2%) of survey questionnaires were returned (returned to sender) because of invalid addresses: no dental practice registered at that address or the dentist no longer practicing at that practice address. This confirms the validity and comprehensiveness of the Dental Council of Hong Kong registered list of dentists, and its suitability as a sample frame of all dentists in Hong Kong. It is likely that the few questionnaires returned-to-sender was because the practice had moved in the intervening times or the dentists had ceased to practice at the registered addresses provided. The Dental Council of Hong Kong stipulates notice of commencement of practice and/or relocation should be provided within one month (www.dchk.org.hk).

Initial response after first mailing was low (25%); attempts were made to enhance participation rate by sending out a second mailing; the response rate did increase to ~35% but was still low. The response rate is similar to what has been achieved in other community health projects surveying dentist in recent years (Wong et al., 2007; Lo et al., 2004). The large non-response rate may have introduced elements of non-response bias. It was not feasible to compare the profile of participants with non-participants to determine differences in the profile of dentists who participated versus those who did not
participate owing to limitations of information available on the list of registered
dentists in Hong Kong (www.dchk.org.hk). Thus any inference made from this
community health project should be taken in light of the low response rate and
potential of a non-response bias.

The profile of the survey participants was diverse in terms of age, years
in dental practice, where dentists had qualified from, registered specialist
status, receipt of dental education overseas and experience of living
overseas. This made it possible to explore variations in the use of dental
services by mainland Chinese in relation to dentists backgrounds/profile; and
variations in the surveyed dentists’ attitude towards ‘in-bound’ dental tourism.

6.2 ‘In-bound’: Use of dental services by mainland Chinese patients.

It is recognised that use of Hong Kong medical services by mainland
Chinese in Hong Kong ‘in-bound’ medical tourism is considerable, most
notably in terms of obstetric services (Chung, 2007). To date, there is a lack
of data on the use of dental services by mainland Chinese in Hong Kong
which is what this community health project aimed to address. More than 90% of
dentists surveyed reported that they treated patients from mainland China
in their practices; and more than one-in-ten reported that it constituted over
ten percent of their total patient pool and also constituted over ten percent of
their annual income. This would suggest signs of, if not an already established
‘in-bound’ dental tourism in Hong Kong. Moreover, ‘in-bound’ dental tourism
far exceeds estimates of ‘out-bound’ dental tourism from Hong Kong residents
to neighboring Shenzhen which has been estimated as 2% or less (Lo et al; 1990; Lo et al., 1998).

The use of dental services by mainland Chinese is not surprising given the large number of mainland Chinese visitors to Hong Kong. Hong Kong sees an estimated 59 million visitors a year, more than eight times its own population and the number of mainland Chinese visitors constitutes an estimated 45 million, or three-quarters of all visitors to Hong Kong (Nip A, SCMP, 2013). Globally there is growing recognition of the mainland Chinese tourist market with an estimated 97 million mainland Chinese tourists visiting overseas in 2013 and Hong Kong is the number one overseas destination for Chinese tourists (Yu J, SCMP, 2012). It is estimated that in-bound mainland Chinese tourists will double by 2020 fueled by a fast-growing middle class and eagerness to experience and avail of services and products overseas (CLSA Asia-Pacific Markets, 2014). Coupled with this the government of Hong Kong SAR continues to enhance access to Hong Kong, the quota of the Hong Kong Tour Group Scheme of Mainland visitors was abolished in 2002; and the Individual Visit Scheme allowing residents of designated Mainland cities to visit Hong Kong as independent travelers was introduced in 2002 and now concerns over 49 mainland cities (Hong Kong Tourism Board, 2013).
6.3 Types of dental services sought by mainland Chinese patients in Hong Kong

According to the dentists surveyed the majority of patients from the mainland sought ‘routine dental care’. This would demand for general dentistry in Hong Kong. At present there is an approximately 2200 registered dentists in Hong Kong; with an estimated dentist to population ratio of 1:3200 which is lower than in other countries of Europe and America (Chu et al., 2013). Moreover, the dentist to population ratios varies considerably in Hong Kong from below 1:2500 in commercial districts to 1:2000 in part of the New Territories (Lo and Wong, 1999). It is important that ‘in-bound’ dental tourism for general dentistry be monitored on the whole; and across the geographical territories of Hong Kong such that demands and supply can be addressed; and if needs be with appropriate manpower planning.

Our community health project identified also that there was specific demand for prosthodontics care, oral surgery and dental implants and other specialist type dental services to a lesser extent. The demand for dental implants, prosthetics/ oral rehabilitation and endodontics has been recognised in other areas of dental tourism (Mattheos and Janda, 2012; Ramachandra, 2011; Barrowman et al., 2010). In Hong Kong there has been a significant increase in the number of general dental practitioners practicing implant dentistry since 2004; and over 80% of dentists who own their private practice perform implant dentistry, and among them about half place or restore five or more implants per quarter (Ng et al, 2011). Hong Kong has eight recognised dental specialties (Community Dentistry, Endodontics, Family Dentistry, Oral
& Maxillofacial Surgery, Oral Rehabilitation, Orthodontics, Pediatric Dentistry, and Periodontics) and the number of registered specialists in prosthodontics is 21; in oral & maxillofacial surgery is 52; and in endodontics is 16 (Chu et al., 2013; www.dchk.org). It is particularly important to monitor and consider future demands of such dental specialties services, as dental specialists are generally small in number and the length of training requires at least six years, thus the issue of dental specialist manpower needs close attention and forward planning accordingly.

6.4 Key reasons why mainland Chinese patients seek dental care in HK

Typically for ‘out-bound’ dental tourism, cost (cost-savings) is a key reason why people travel for dental care overseas (Osterle et al., 2009; Turner, 2009; Köberlein and Klingenberger, 2011). However, cost-savings were perceived by only two of the dentists surveyed (<1%) as the key reason why mainland Chinese visitors availed of dental care at their practices; and is thus of little consideration for ‘in-bound’ dental tourism.

The key reason cited by dentists surveyed as to why mainland Chinese visitors availed of dental services at their practices was because of ‘quality of treatment’; with over three-quarters of dentists citing this as the ‘key reason’. Much of the concerns about dental tourism relates to ‘quality’: lack of standards and accreditations of dental providers, appropriate use of clinical information technologies, practice of evidence-based guidelines, coordination of pre- and post- treatment arrangements, provision for adverse events such as those requiring medical attention or hospitalization, certification and
accreditation of safety and quality (Burke, 2010; Arends, 2011; Kovacs and Szocska, 2013; Conti et al., 2014). Further assessment, verification and certification of the quality of dental services is warranted as this is likely to be key in promoting dental tourism and is in line with *Hong Kong Quality Assurance Agency* guidelines.

The experience of dentists in Hong Kong was also commonly cited (~10%) as a ‘key’ reason why mainland Chinese patients sought dental care here. Since its inception in 1980 the Faculty of Dentistry at HKU has had an international reputation in preparing dental professionals to serve the needs of the community, to be global thinkers and future leaders of the profession (Faculty of Dentistry, the University of Hong Kong). Coupled with this the Faculty has an extensive postgraduate programme that facilities training across eight dental specialties (Chu et al., 2013). Continued innovations in dental education in undergraduate and postgraduate dentistry are keys in ensuring Hong Kong’s reputation as global leaders in training dentists and continuing professional development is also important so the local dentists can update their skills and knowledge.

### 6.5 Logistics and continuity of care for mainland Chinese patients

Many concerns relating to dental tourism have also focused on logistical arrangements, dentist-patient communication and in particular continuity of care (Conti et al; 2014). Pre-treatment arrangements can be problematic such as lack of autonomy over practitioner choice and little knowledge of qualifications and reputation of treatment providers. In the Hong
Kong context this does not appear to be a problem as most dentists reported that patients from mainland China attended their practice based on ‘word-of-mouth’ recommendations from other patients and rarely were third parties such as medical tourism agencies involved. The use of internet as a source of practice information was also cited by some as the reason why patients from mainland China attended their clinics; and this has been reported in other settings too (Ní Riordáin and McCreary, 2009). Undoubtedly the internet can play an important role in providing information to patients about dental services offered by the practice and about the dentists’ qualifications. The Dental Council of Hong Kong accepts in principle that the use of internet (homepages for dental practices) should be allowed; however it stipulates that dentists must observe their rules governing internet use (www.dchk.org).

In dental tourism the notion of providing treatment in a short period coinciding with a vacation is common (Kovacs and Szocska, 2013). In Hong Kong such practices do not appear to be common with most dentists reporting that their arrangements for dental care were such that it took several weeks or more to complete involving several dental appointments. Nonetheless issue of continuity of care is problematic with only a third of dentists reporting that their mainland Chinese patients typically were reviewed or maintained and a minority having in place mechanisms for feedback or comments following treatment. This issue warrants considerations particularly if ‘in-bound’ dental tourism is to develop.
6.6 Language communication and cultural understanding with mainland Chinese patients

Cultural understanding and language are important for patients to understand treatment options (and their successes); for informed consent, and to ensure patient compliance and aftercare (Bridges et al., 2011). Use of multiple languages was commonly reported by dentists in communicating with mainland Chinese dental patients. Most frequently Mandarin was used; Mandarin is the official Chinese language of mainland China as opposed to locally used Cantonese. In addition, English language was reported to be used by approximately a quarter of dentist when communicating with patients from mainland China. In Hong Kong, the basic law stipulated that both Chinese (de factor Cantonese) and English are the official languages and current government language policies promoting trilingualism (Standard Committee on Language Education and Research, 2013). Current practices in the undergraduate dental curriculum both English and Chinese (Mandarin) languages for professional use are taught. Increasingly, it is recognised that dental schools must prepare future dentists to deliver culturally sensitive care to diverse patient populations and while there is little agreement of how best to, and when to teach these skills to students building upon learning in behavioral sciences, ethics and public health has been advocated (Donate-Bartfiled et al., 2014).
7.0 CONCLUSIONS AND RECOMMENDATIONS

7.1 Conclusions

I. ‘In-bound’ dental tourism from mainland China to Hong Kong exists. Most private dental practitioners (>90%) in Hong Kong reported treating mainland Chinese patients at their dental practices. For an estimated one in seven private dentists, mainland Chinese patients constitute more than 10% of their patients and more than 10% of their annual income. Variations in the practice of treating mainland Chinese patients exist with respect to the dentists’ backgrounds and qualifications.

II. Private dentists in Hong Kong foresee dental patients from mainland China as a potential market from their dental practices and expressed positive attitudes in their willingness to treat such patients. More than a third of dentists expressed a willingness to promote dental tourism in Hong Kong. Variations in dentists’ attitudes to the potential market of ‘in-bound’ dental tourism and willingness to promote dental tourism exist with respect to dentist backgrounds and qualifications.

III. Private dental practitioners report that often mainland Chinese patients seek routine dental care, but there were also specific demands for advanced care such as prosthetic dentistry, endodontic treatment and implant dentistry.
IV. ‘Quality’ of dental care is reported to be the key reason why mainland Chinese patients seek dental treatment in Hong Kong.

V. Current arrangements for ‘in-bound’ dental tourism patients from mainland China is largely through patient recommendations and ‘word-of-mouth’. Practice information from the internet also facilities logistical arrangements. The reliance on third party agencies or use of incentives is not common.

VI. Providing maintenance/review to mainland Chinese patients is infrequent (with only a third of dentist reporting typically to do so), and in addition limited mechanisms are in place for patients to provide feedback/comments on treatment they receive.

VII. The use of multiple languages in communicating with ‘in-bound’ dental patients from mainland China is common, particularly the use of Mandarin, the official language of mainland China; in addition to English and Cantonese (the local Chinese language).
7.2 Recommendations

I. It is important to recognize and monitor the growth of ‘in-bound’ dental tourism in Hong Kong, particularly from mainland China, so as to understand the demand on existing dental services locally so as to inform dental manpower planning in the future.

II. The demand for advanced and specialist dental care services should be monitored to inform specialist manpower needs in Hong Kong.

III. Profiling and promoting standards and accreditations of dental practices in terms of the use of clinical information technologies, practice of evidence based guidelines, certification and accreditation of safety and quality will enhance quality assurance of dentistry in Hong Kong and its standing as ‘in-bound’ dental tourism destination.

IV. Logistical arrangements for ‘in-bound’ dental tourism should continue to be monitored. Particular attention to the use of third part agencies and internet requires consideration in line with existing policies and practices permitted under the Dental Council of Hong Kong.

V. It is important to devise strategies for appropriate aftercare, maintenance and review of ‘in-bound’ dental tourism patients. Current mechanisms in place for post-treatment feedback and evaluations should be improved upon.

VI. The government’s current language policies of promoting trilingualism should be considered and integrated in existing professional language training at the Faculty.
8.0 REFERENCES


Lo ECM, Cheung T, Ching SK, Chung CHG, Ho YL, Lau MKJ, Law CH, Li


9.0 APPENDIX

9.1 Appendix 1

Introduction

We are a group of senior dental students conducting a Community Health Project as partial fulfillment for Bachelor Degree of Dental Surgery (BDS) at The University of Hong Kong (HKU). We are interested in the use of the Hong Kong dental services by overseas patients (i.e. those not ‘normally’ residing in the HKSAR), particularly those from the People’s Republic of China (PRC).

Your participation in this questionnaire is extremely appreciated and is critical to furthering our understanding of the demand for dental services among patients from the PRC. This will be useful to inform the profession about dental tourism in Hong Kong.

The response rate to our survey thus far is rather low. In order to enhance the representativeness of the study and thereby ensure that the findings are meaningful for the dental profession in Hong Kong, may we ask you to take a few minutes now to complete the questionnaire if you have not done so already. Kindly return the completed questionnaire in the self-addressed envelope provided by 11th April 2014. The information you provide is strictly anonymous and the information will only be used for our statistical analysis.

Thank you for your participation in advance. Should you have any queries, please feel free to contact our project team leader Mr. Ng Yin Leung Nicholas by e-mail at nicylng@connect.hku.hk or by phone at +852 5190 0510.
Please tick the appropriate box for each statement as shown below.

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I would be willing to treat patients from the PRC in the near future if I had the chance.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>I do not find/ foresee language as an obstacle during treatment.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>I do not find/ foresee difficulties in providing continuous care for patients from the PRC.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>I do not find/ foresee time management as a difficulty during treatment.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>I do not find/ foresee patients’ attitude/cultural background as an obstacle during treatment.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>I do not find/ foresee the busy schedule of my clinic as a difficulty to provide treatment.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>I do not find/ foresee patients’ expectations as a difficulty during treatment.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>I do not find/ foresee patients’ financial issues as an obstacle to provide treatment.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>I do not find/ foresee treating patients from the PRC is more challenging than treating local patients.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>I find/ foresee patients from the PRC as a better source of income for the clinic than those from the local.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>I find/ foresee patients from the PRC as a potential market.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>I do not find/ foresee difficulties in attracting patients who are residents of the PRC.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>I wish to treat patients from the PRC.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>I do not find/ foresee treating foreign patients is difficult.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>I agree that dental tourism is a good thing.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td>I am willing to promote dental tourism in HKSAR.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
17. Have you been approached by any medical tourism agency/agencies?
   □ Yes         □ No

18. Do you treat other patients from the overseas? If so, where do they come from?
   Multiple answers possible.
   □ Asia                  □ America           □ Africa
   □ East Asia (Japan, Korea, Taiwan) □ Europe       □ Middle East
   □ Oceania                □ Southeast Asia □ No

19. Have you treated at your clinic in the HKSAR, people who are citizens of the
    People’s Republic of China (PRC) and ‘normally’ residents in the PRC?
   □ Yes         □ No

20. Did your patients from the PRC approach you either in organized groups or
    through agencies?
   □ Yes         □ No

21. Do you provide special offers/incentives for patients from the PRC?
    Multiple answers possible.
   □ Reimbursement – Travel (e.g. flight/train/bus/ferry)
   □ Package Treatment   □ Lower costs
   □ Guarantee            □ None

22. Do you have an office/a clinic abroad for the purpose of consultation prior to
    their treatment in Hong Kong?
   □ Yes         □ No

23. How do your patients from the PRC, generally/typically, know of you?
   □ Word-of-Mouth/Recommendation   □ Online
   □ Random Walk-in                 □ Others: ____________________

24. What is the key reason, do you think, as to why patients from the PRC decide to
    have their treatment in Hong Kong? (One option only)
   □ Price                  □ Range of treatment
   □ Quality of treatment   □ Dentist’s experience
   □ Others: ________________

25. What is the nature of treatment that your patients from the PRC seek?
   □ Emergency treatment       □ Elective treatment
   □ Comprehensive treatment

26. What language do you usually use to communicate with your patients from the
    PRC? Multiple answers possible.
   □ Cantonese                 □ English                 □ Mandarin
   □ Translator                □ Others: ____________________
27. What treatment(s) do your patients from the PRC typically seek?  
Multiple answers possible.  
☐ Endodontic Treatment  ☐ Implants  
☐ Oral Surgery  ☐ Orthodontic Treatment  
☐ Paediatric Treatment  ☐ Periodontal Treatment  
☐ Prosthetic Work – Denture/Bridge/Crown  ☐ Routine Treatment  
☐ Others: ____________________

28. On average, how long do you usually take to complete a whole treatment course for your patients from the PRC (excluding maintenance/ recall)?  
☐ Within a day  ☐ Within a couple of days  
☐ Within a week  ☐ Within a couple of weeks  ☐ A month or more

29. On average, how many appointments does it take for your patients from the PRC to complete the treatment they seek at your clinic?  
☐ 1-2  ☐ 3-4  ☐ 5-7  ☐ 8-10  ☐ >10

30. Do you have an office/ a clinic abroad for the purpose of aftercare?  
☐ Yes  ☐ No

31. Do your patients from the PRC usually come back for review?  
☐ Yes  ☐ No

32. Do you provide any means for your patients from the PRC to leave their comments/ feedback/ evaluations?  
☐ Yes  ☐ No

33. What is the estimated percentage of increase in your total patient flow contributed by your patients from the PRC?  
☐ 0-10%  ☐ 11-20%  ☐ 21-40%  ☐ 41-50%  ☐ >50%

34. What is the estimated percentage of increase in your total annual income contributed by your patients from the PRC?  
☐ 0-10%  ☐ 11-20%  ☐ 21-40%  ☐ 41-50%  ☐ >50%

35. Have you been invited to work in a dental clinic in the PRC?  
☐ Yes  ☐ No

36. Have you been invited to work in an overseas dental clinic, excluding the PRC?  
☐ Yes  ☐ No

37. Are you interested in working as a part-time dentist in the PRC?  
☐ Yes  ☐ No

38. Are you interested in working as a part-time dentist overseas, excluding the PRC?  
☐ Yes  ☐ No
Dentist Background and Qualification

(Information provided is strictly confidential and only used for data analysis. It will not be feasible to identify any individual.)

A. Gender : □ Female □ Male
B. Age : □ <40 □ 40-50 □ 50+
C. Where did you first obtain your qualification in dentistry?
   □ Hong Kong □ Others: _______________________

D. How long have you been practicing in Hong Kong?
   □ 1-5 year(s) □ 6-10 years □ > 10 years

E. Are you a registered specialist in Hong Kong?
   □ No □ Undergoing training* □ Yes*
   * Please answer the following question.
   Which specialty below?
   □ Endodontics □ Oral and Maxillofacial Surgery
   □ Periodontology □ Prosthodontics □ Orthodontics
   □ Paediatric Dentistry □ Community Dentistry □ Family Dentistry
   □ Others: _______________________

F. Do you work at any dental practice in Hong Kong?
   □ Yes* □ No
   * Please answer the following questions.
   i. How many dental practice(s) do you work at in Hong Kong?
      □ 1 □ 2 □ 3 □ 4 □ >4
   ii. Are you the principal in any of the practices?
      □ Yes □ No
   iii. What is the number of dental chairs in the largest practice you work at?
      □ 1 □ 2 □ 3 □ 4 □ 5 □ > 5
   iv. Is there any registered specialist care at your practice/ any of the practices?
      □ Yes □ No
G. Have you lived overseas apart from your origin country?

☐ Yes* ☐ No

* Please answer the following question.

Years lived overseas

☐ 1-2 year(s) ☐ 3-4 years ☐ > 5 years

H. Have you received dental education overseas?

☐ Yes* ☐ No

* Please answer the following questions.

i. Which dental education level have you obtained?

☐ Bachelor degree or the equivalent

☐ Postgraduate qualification or the equivalent that is registerable with the Hong Kong Dental Council (HKDC)

☐ Postgraduate qualification or the equivalent that is not registerable with the HKDC

ii. Are you registered as a specialist overseas?

☐ Yes ☐ No

iii. Have you practiced dentistry overseas before?

☐ Yes ☐ No

**This is the end of the questionnaire.
Your participation is highly appreciated.**