Global Bridges Japan Full Proposal English Translation
Request ID: 35533599 (LOI#3)
Organization: Japan Health Care Dental Association
Project Title: Capacity Development: Dental Hygienists as Supporters and Collaborators of Smoking Cessation

1. Project Objective

There are not many dental clinics that perform smoking cessation support activities in Japan. As stipulated in the remuneration of social insurance, the general public does not expect dental medical facilities to correspond to nicotine addiction through medical practices. However, our institute has recommended smoking cessation support activities since foundation (known at the time as The Japan Health Care Dental Association) as check items when asking a patient about smoking habits[1)]. There is a certain number of clinics that perform smoking cessation support activities among member clinics in our institute.
Smoking habits are proven to be an important risk factor of aggravating periodontal diseases and are also known to cause oral cancer and tooth decay. Because of this, smoking cessation support is a necessary medical approach for dental medical examinees that suffer from life style related diseases
In this institute, there is a common acknowledgement that improvement and maintenance of the QOL (Quality of Life) through the preservation of oral health, prevention of tooth decay and periodontal diseases, as well as treating conditions at an early stage are the main roles of dental care. Because of this, in addition to therapeutic intervention centered on dentists, we also focus on health promotion by a medical team that includes those such as dental hygienists. Thus, we should place high value on the roles played by dental hygienists in clinics and invest a significant amount in their training.
Accordingly, we will target dental hygienists that are in a tutor position for our institution's dental hygienist training and cultivate "smoking cessation support guidance dental hygienists" by performing smoking cessation training utilizing the EBCD method. Such smoking cessation hygienist advisor will train "smoking cessation dental hygienists" by performing smoking cessation support training seminars locally. Through this process, we will spread awareness of "smoking cessation support dental hygienists" among dental medical personnel and create an environment that includes smoking cessation support within the dental medical field as routine medical care.

2. Project background (necessity of the project)

Among domestic organizations and institutions related to dental health as well as medicine in general, our institution is one of the institutions that have declared smoking cessation at an early stage in 2001, right after the first declaration made by the Japan Lung Cancer Society in the year 2000. Further, in the "Report of the actual conditions of smoking cessation support in dentist clinics" conducted by our institution in 2006, the average number of visiting patients in one clinic per month was around 580 patients (among 17 clinics) and the patients that successfully quit smoking* were 4.3 people per year.
Our institution has provided daily support for smoking cessation support activities for members and non-members in dental clinics and healthcare centers by conducting situation reports and disseminating smoking cessation support information (poster, pamphlets, etc.). Further, through the cooperation towards articles listed in our institution's journal (all articles are published for free reading on our website) and other organization's journals, we have also provided academic ongoing reports regarding the health impact of smoking[2].

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*歯科診療所での禁煙達成症例についての調査：禁煙達成者とは初診時に喫煙で通院中あるいはメンテナンス中など初診後の歯科診療所通院中に禁煙したことを把握できた方とした。その後に最喫煙があっても一度禁煙したことが把握できれば対象者とした。平成 13 年から平成 17 年の来院者（初診はそれ以前でも可能）について禁煙したことを把握できた症例を調べた。

2 熊谷崇　患者データの管理――その意義と方法　J Health Care Dent 1999; 1: 26-27.

[2] Fujiki S et al *Analysis of causative factors of tooth loss during the maintenance period—Comparison of risk factors between maintenance and non-maintenance cohorts* J Health Care Dent. 2010; 12: 6-13.

For the impact of smoking, the targets of dental universities, dental hygienist universities and vocational school curriculums include exacerbation factors of periodontal diseases, decrease in blood flow, yellow teeth, and oral cancer risks. On the other hand, the opportunities to learn about smoking cessation support is extremely limited. In particular, since there are few opportunities for dental hygienists to interact with smoking patients during training such as clinical training and it is impossible to perform maintenance in the long-term, this is comparable to having no practical opportunities of smoking cessation training.

Our institution's mission is to protect and improve patient's health by continuing maintenance care centered on dental hygienists. When performing maintenance care, we have performed continuous activities of gathering conformed data including photographs for almost two decades. When conducting smoking cessation support, it is believed that collecting new data is not necessary. Rather, by performing smoking cessation support, existing data (change on standing for gum coloring, the worsening or improvement of periodontal diseases, etc.) will be shared with patients during the treatment process and it is expected there will be an increase in such opportunities.

Compared to other institutions, our dental hygienists are deeply involved with our administration (as of September 2017, there are 13 dental hygienists among 64 representatives of the operating body). Maintenance practices by dental hygienists can be listed as one of the practices of "dental practices that protect and improve health" performed by our institution. The dental hygienist training course that serves as a place for students to learn practical required knowledge, skill and communication skills has been going on since 1999, and around 400 dental hygienists attending this program. Further, our institution's hygienist certification system was established in 2004 and certified member hygienists serve as the main administrators. Certified member hygienist will also serve in central roles for this project.

Currently, many have pointed out how smoking cessation advice enforcement rate is low among physicians (32.4%, low and comparable to France and Germany)[3]. We require another situation report of the baseline targeting dental clinics of members. Our target will be a 20% improvement for smoking cessation enforcement rates by dental hygienists through this project.

3. Target audience

The direct target of this project are dental hygienists (regardless of membership). (Compared to dentists, physicians and nurses) dental hygienists have relatively longer consultation hours. It can be said that they have a special role even among medical professionals for smoking cessation initiatives[4]. Further, since they are more involved with patients, there have been reports that dental hygienists are more proactive and confident compared to dentists regarding smoking cessation support[5].

Chigusa R and Sakurai A *Recovery from cosmetic defects in the maxillary anterior region after periodontal treatment by basic periodontal treatment, SPT, and cessation of smoking* J Health Care Dent. 2014; 1: 36-41

Kato T et al *Measurement of Reduced Gingival Melanosis after Smoking Cessation: A Novel Analysis of Gingival Pigmentation Using Clinical Oral Photographs* Int J Environ Res Public Health. 2016 Jun; 13(6): 598

Kato T et al *Gingival Pigmentation Affected by Smoking among Different Age Groups: A Quantitative Analysis of Gingival Pigmentation Using Clinical Oral Photographs* Int J Environ Res Public Health. 2017 Aug 4;14(8). pii: E880. doi: 10.3390/ijerph14080880.

[3] 中村正和 , 他： 医療や健診の場での禁煙推進の制度化とその効果検証に関する研究 . 厚労科研費平成 25 年度「発がんリスクの低減に資する効果的な禁煙推進のための環境整備
と支援方策の開発ならびに普及のための制度化に関する研究」報告書

[4] Parker DR A dental hygienist's role in tobacco cessation Int J Dent Hyg. 2003 May;1(2):105-9.
Edwards D et al. "Dentists' and dental hygienists' role in smoking cessation: an examination and comparison of current practice and barriers to service provision" Health Promot J Austr. 2006 Aug;17(2):145-51.

[5] 5 と同じ

For recruitment methods of participants, we will post notifications on our website and distribute fliers and newsletters every other month (we will also notify non-member clinics through direct mail). We will also further encourage the participation of dental hygienist schools while focusing on their instructors. For participants in our institution with the highest involvement levels, there are 40 applicants that are certified dental hygienists (136 have been certified by tests such as practical examinations among 351 certified test examinees). Among these participants, 20 will be in charge of the management of local seminars after attending tutor training seminars.

During the two-year period of the project, dental hygienists with tutor education experience will conduct workshop type seminars that incorporate EBCD (Experience-Based Co-Design) targeting 400~500 dental hygienists. In addition to small scale one or two-time workshop type seminars where one tutor teaches 10~15 hygienists, we will also conduct a large-scale workshop with 100 trainees twice. Individuals that actually become certified as a smoking cessation support dental hygienists are probably around half of all trainees.

It is believed that dental hygienists take on only a few new patients with periodontal diseases per month but they examine around 8 patients per day and at least 180 patients per month. If required, these hygienists should be able to participate in smoking cessation support. Even for half of the number of patients, a smoking cessation support dental hygienist should be able to impact around 270 patients seeking diagnosis for 3 months. Smoking cessation support dental hygienist training will continue even after this study period. If the initial number of trainees is 250, this means that the number of target patients will be more than 67,000 for three months and will continue to increase further in the future.

Among these patients with periodontal diseases only around one new patient per month has high nicotine dependency and requires particular high-density smoking cessation support. Hygienists are deeply involved with their examinations and it is expected that many will be able to quit smoking successfully. Further, a significant number of patients that interact with smoking cessation support dental hygienists are minors. Many smoking habits are hidden under the surface because the law forbids minors from smoking. However, it is possible to judge smoking habits easily during dental examines through bad breath, teeth stains and gum color. By providing an opportunity to support smoking cessation for minors, it is possible to achieve smoking cessation at an early stage of addiction.

Smoking cessation support during dental examinations is not necessarily something that makes patients notice their health behavior to prevent lung cancer or other critical disease risks. Rather, such dental examinations mainly focus more on regular small satisfactions such as treating gum coloration, bad breath or the loss of taste. In this sense, it is possible to approach patients that have been overlooked for nicotine addiction treatment such as casual smokers.

The impact of smoking is included in course contents at dental hygienist schools and universities but there are almost no opportunities for practical training related to smoking cessation support and such training varies highly between dentist clinics as well as between dental hygienists working in the same clinic. Further, for dental examinations, there are almost no clinical records for smoking cessation support that focuses on the involvement of dental hygienists and patient narratives. This project requires patient and multiple authorship (including patient narratives) case reports in order to receive certification as a smoking cessation support dental hygienist. Further, we will publish report collections and post them on our website so dental hygienists that are unable to participate in workshops directly can refer to them later.

4 Project design

Smoking cessation support hygienist training utilizes EBCD that served a significant role to improve medical quality in the UK. Specifically, we will interview several patients that have received smoking cessation support at dental clinics, record movies of patient narratives, and create trigger films that stimulate further discussion. We will form a group of several dental hygienists and have

them discuss matters after watching such trigger films. By hearing the words of patients that actually received smoking cessation support, participants that do not enforce smoking cessation support can use this information as examples of smoking cessation initiatives. Participants that already have experience in smoking cessation support can compare such examples with their experience and discuss points such as improvement and concern with the rest of the group.

We will train 40 smoking cessation support dental hygienist in the first year, among these 20 hygienists will take on the role of instructors for training of the following year. We should be able to train 40 smoking cessation support dental hygienists in the first quarter of the second year and at least 200 hygienists by the end of the second year (among the 400~500 dental hygienists taking the seminar, it is expected that half or less will submit one or more examples as a case report in order to be certified). Further, smoking cessation support dental hygienists are not required to be members. Smoking cessation support dental hygienists will be required to create a smoking cessation case report in narrative format every three years (new hygienist advisors will make one report for their first year) in order to renew their certification. We will judge the initiatives of this project based on these reports.

The narrative report collections will be listed in our journal and used for advertising. These reports will be disseminated as reference materials for smoking cessation initiatives within and outside the institution.

"Smoking cessation support dental hygienist" is a certification unrelated to compensation and is merely a private qualification but we consider the clinical report performances related to this qualification as socially valuable.

According to search sites such as Pubmed, there are significant amount of reports related to smoking cessation support by dental hygienists but there are not many articles regarding education. Because of this, I was unable to search examples of dental hygienist education with EBCD.

5 Evaluation design

In dentistry, there are many dental medical personnel that think they are unable to perform smoking cessation support. For social insurance, calculations such as "nicotine addiction management fee" are not acknowledged in dental medical facilities and it is impossible for dentists to correspond to nicotine addiction through medical practices. Because of this, many personnel in dentistry believe that dental hygienists also cannot provide smoking cessation support through medical assistance practices. To begin with, at clinics, many related personnel believe their role is to repair and provide prosthetics for teeth lost due to tooth decay and periodontal diseases rather than the prevention of such health conditions. In that sense, this project aims to overthrow such common practices in the industry.
For this project, we will train 200 smoking cessation support dental hygienists by the end of the second year. We will evaluate this progress using the following methods.

① We will evaluate the awareness level of "smoking cessation support dental hygienists" in the dentistry medical field by evaluating WEB attitude surveys.
We will study the initial stage and the end of the second year of the project by using online surveys.

② Authorized number of smoking cessation support dental hygienists and the number of trainees for the workshop held by dental hygienist advisors. Below are the details of the scheduled workshops.
・Two workshops of 10~15 trainees per tutor.
・Two large scale workshops on a large scale of 100 trainees
We expect to train a total of around 400~500 trainees through the workshops.
Among these, we will certify individuals that have submitted case reports related to smoking cessation support (the case report does not necessarily require to be a successful example of quitting smoking) as a "smoking cessation support dental hygienist". Further, we will ask

hygienists to submit case reports every three years in a narrative format in order to renew their certifications.

We will evaluate the project based on the number of trainees and number of hygienists that renew their certification.

For the two years of this project, we will evaluate the smoking cessation example reports made by smoking cessation support dental hygienists and their numbers (our target for the end of the second year is 40 reports).

③ Enforcement rate of smoking cessation support

We will compare and evaluate using the enforcement rate of smoking cessation support provided by dental hygienists (based on the survey in the beginning of the project) in clinics that are members of our institute.

④ We will evaluate the collection of case reports (in narrative format) submitted by trainees.

⑤ We will evaluate the annual smoking cessation achievement rates by comparing it to the smoking cessation support actual condition survey (2006) conducted by our institution.

Success or failure of smoking cessation can be aggregated by using its epidemiological data. Since smoking cessation support dental hygienists conduct smoking cessation support activities with a significant amount of pride on a daily basis, we believe the activities should be persistent.