Effective Dental Approaches in Smoking Cessation Intervention

Nurul Asyikin Yahya
Department of Dental Public Health
Faculty of Dentistry, UKM
Kuala Lumpur

nurulasyikin@ukm.edu.my
The Scenario

It is evident from the Global Adult Tobacco Survey (GATS) 2011, tobacco consumption is still a major public health problem in Malaysia.

In 2011, 23.1% or 4.75 million Malaysian adults aged 15 years or older were current smokers of tobacco:-- 43.9% of men (4.64 million) and 1.0% of women (0.10 million).

A daily cigarette smoker smokes an average of 14 cigarettes per day.
PREFACE

The World Health Organization (WHO) has recognized that the most significant effects of smoking on the oral cavity are pre-cancers and oral cancers, increased severity and extent of periodontal diseases, and poor wound healing.
### Background

<table>
<thead>
<tr>
<th>4.75 million Malaysian adults aged 15 years or older were current smokers.</th>
</tr>
</thead>
<tbody>
<tr>
<td>43.9% of men</td>
</tr>
<tr>
<td>1% of women</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dentists are in a unique position to help tobacco users to stop tobacco use.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Dentists perceived that their patients do not consider smoking cessation as part of their professional role.</th>
</tr>
</thead>
</table>

| More research is required to establish efficacy of smoking cessation advice delivered by dentists before making any changes in the clinical practice. |
Yahya & Croucher (2005)
- Time consuming (n=29, 40.3%)
- Lack of knowledge (n=39, 54.2%)

Asmaon & Ishak (2007)
- Lack of time (56.5%)
- Lack of information (86.1%)

Rathna et al (2012)
- Insufficient time (n=195, 82.6%)
- Lack of knowledge (n=112, 47.5%)

Amer Siddiq et al (2014)
- Time consuming (n=130, 60.5%)
Minimising the problems
Fourteen trials compared the 5A’s intervention (OR 1.7) with usual care, or less intensive treatment controls at follow-ups between 6-24-months.

* Eight trials targeted cigarette smokers.
* Six trials targeted smokeless tobacco users.

(Carr & Ebbert, 2012)
### Smoking cessation trials and studies on smokers by dentists and its effectiveness

<table>
<thead>
<tr>
<th>Authors</th>
<th>Year</th>
<th>Country</th>
<th>Setting</th>
<th>n</th>
<th>Intervention</th>
<th>Control</th>
<th>Outcome</th>
<th>Quit rate OR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Binnie</td>
<td>2007</td>
<td>UK</td>
<td>Hospital perio</td>
<td>118(T)</td>
<td>1. Intervention group-5A’s, NRT prn (gum,patches)</td>
<td>2. Usual care-info on role of tobacco in perio disease, very brief advice to quit</td>
<td>3,6,12m point prevalence</td>
<td>1.47 (0.24,9.16)</td>
</tr>
<tr>
<td>Ebbert</td>
<td>2007</td>
<td>USA</td>
<td>General dental practices (n=8)</td>
<td>60(I) 22(C)</td>
<td>1. Quitline referral- brief counselling + quitline referral</td>
<td>2.Usual care-brief counselling + patient education brochure</td>
<td>6m, 7-day point prevalence</td>
<td>0.89 (0.29,2.69)</td>
</tr>
<tr>
<td>Gordon</td>
<td>2010</td>
<td>USA</td>
<td>Private dental practices (n=68)</td>
<td>2160(T)</td>
<td>1. 3A’s: ask,advise, arrange quitline referral 2. 5A’s: ask, advise, assist, arrange counselling with Quitline referral as an option at provider’s discretion</td>
<td>3.Usual care: practitioners provided usual tobacco-use cessation services</td>
<td>12m prolonged abstinence</td>
<td>2.11 (0.88,5.11)</td>
</tr>
<tr>
<td>Gordon</td>
<td>2010</td>
<td>USA</td>
<td>Public clinics dental</td>
<td>2549(T)</td>
<td>1. Intervention- brief ‘tailored’ tobacco advice, assistance, &amp; NRT</td>
<td>2. Usual care- Tobacco cessation methods as standard practice</td>
<td>7.5m prolonged abstinence</td>
<td>2.89 (1.76,4.74)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Authors</th>
<th>Year</th>
<th>Country</th>
<th>Setting</th>
<th>n</th>
<th>Intervention</th>
<th>Control</th>
<th>Outcome</th>
<th>Quit rate OR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hanioka</td>
<td>2010</td>
<td>Japan</td>
<td>Dental clinics</td>
<td>33(I) 23(C)</td>
<td>1. Intervention- behavioural and pharmacological (NRT patch &amp; gum) relapse strategies; counsel at initial 2 visits and at 2, 4, 8 and 12 w.</td>
<td>2. Non-intervention (not described)</td>
<td>3,6,12m continuous abstinence</td>
<td>3.81 (0.93,15.53)</td>
</tr>
<tr>
<td>Lando</td>
<td>2007</td>
<td>USA</td>
<td>Dental offices (14-17 yrs old)</td>
<td>344(T)</td>
<td>1. Intervention – provider advice + motivational interviewing/follow-up phone calls</td>
<td>2. Usual care –provider advice</td>
<td>12 m abstinence within past 30 days</td>
<td>0.56 (0.16,2.02)</td>
</tr>
<tr>
<td>Nohlert</td>
<td>2009</td>
<td>Sweden</td>
<td>General dental clinics</td>
<td>300(T)</td>
<td>1. High intensity</td>
<td>2. Low intensity</td>
<td>12 m point prevalence &amp; continuous abstinence</td>
<td>2.31 (1.14,4.68)</td>
</tr>
<tr>
<td>Severson</td>
<td>1998</td>
<td>USA</td>
<td>Private practices (n=75)</td>
<td>4029(T)</td>
<td>1. Minimal intervention 2. Extended intervention</td>
<td>3. Usual care</td>
<td>12 m sustained abstinence</td>
<td>1.08 (0.66,1.75)</td>
</tr>
</tbody>
</table>
AUTHORS' CONCLUSION:
Available evidence suggests that behavioral interventions for tobacco cessation conducted by oral health professionals incorporating an oral examination component in the dental office or community setting may increase tobacco abstinence rates among both cigarette smokers and smokeless tobacco users.

(Carr & Ebbert, 2012)
RCT of Smoking Cessation Interventions Conducted By Dentists

5A’s Intervention
(Fiore et al, 2008)

- Ask about tobacco use
- Assess
- Arrange follow-up
- Assist in quit attempt
- Advise to quit

Brief Advice
(Coleman, 2004; Lando et al., 2007)

- Ask about tobacco use
- Advise to quit
- Assess

Main outcome

Figure 2: Stage of change at baseline by types of smoking cessation intervention.

- 5A's model
  - Precontemplation: 16%
  - Contemplation: 29%
  - Preparation: 56%
- Brief advice
  - Precontemplation: 5%
  - Contemplation: 25%
  - Preparation: 70%

Figure 3: Abstinence at 1-month, 3 months and 6 months follow-up for Brief Advice and 5As model of smoking cessation interventions.

- 5A's model
  - 1-month: 17%
  - 3-months: 19%
  - 6-months: 18%
- Brief advice
  - 1-month: 8%
  - 3-months: 10%
  - 6-months: 5%

ASK
1. When did they started smoking?
2. How many cigarettes taken in a day?

5A’s Intervention
(Fiore et al, 2008)

Brief Advice
(Coleman, 2004; Lando et al., 2007)
ASSESS
1. Tobacco-used related oral health lesions
2. Addiction level

- Staining
- Bad breath
- Periodontal disease
- Oral mucosal lesions

5A’s Intervention
(Fiore et al, 2008)

Brief Advice
(Coleman, 2004; Lando et al., 2007)
Dental patient knowledge about the effect of smoking

- Stained teeth (n=335, 89.3%)
- Bad breath (n=320, 85.3%)
- Oral cancer (n=279, 74.4%)
- Effect on gums (n=264, 70.4%)
- Periodontal disease (n=244, 65.1%)

ADVICE
Advice all tobacco users to quit.

5A’s Intervention
(Fiore et al, 2008)

Brief Advice
(Coleman, 2004; Lando et al., 2007)
ADVICE
Advice all tobacco users to quit.

Personalised advice:
* Stained teeth
* Bad breath
* Oral cancer
* Effect on gums
* Periodontal disease
ASSIST
Involvement of behaviour change intervention

Stage of Change Model (Prochaska & Di Clemente 1983):
1. Precontemplation or contemplation stage
2. Preparation or action stage
3. Maintenance stage

5A’s Intervention (Fiore et al, 2008)
Is it important to follow-up?

- For monitoring and support
- To acknowledge any withdrawal symptoms
- Referral (if needed)

Dental treatments that can be followed-up together:

1. Regular 6 months/annual dental check-up
2. Periodontal treatment
3. Oral cancer treatment
4. Oral surgery treatment
Challenges

Patients
- Compliance

Organisation
- Support

Dentists
- Motivation
SC Training for dentists should be personalised to our needs and dental environment.

More role play and hands-on...

Wrap-up

* The components of steps- Assess, Assist and Arrange in the 5A’s were the extra strength that BA do not have.
* During the steps- Assess and Assist, the counselling technique in 5A’s focuses on discovering a smokers’ feelings, beliefs, ideas, and values on tobacco use to discover any ambivalence about tobacco use.
* Therefore, the reasons, ideas, and needs to eliminate tobacco use may initiate an action to change a person’s smoking behaviour.
BA may be a preferable option as the first treatment option integrated with other dental treatments treating smoking-related oral diseases or conditions in the primary dental care since it is cheaper and less time consuming.

Stead et al. (2013) discussed that the proportion of physicians offering advice to quit is more important and provides more public health benefits.

This was supported by West et al. (2015) which also agree that BA from a trained health care worker may be insignificant but has an important effect in promoting smoking cessation in any health-care system.
Thank you!