



## Smile wide with pride - outcomes of an oral health promotion project among Aboriginal opiate treatment program clients

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### Abstract

**Objective:** To study the effectiveness of oral health promotion programs among *Indigenous opiate treatment program* (OTP) clients and analyse dental appointment compliance in this population.

**Methods:** A program constituting comprehensive dental treatment and oral health promotion was implemented for Aboriginal people who attended the Port Macquarie and Kempsey OTP and the rehabilitation centre, Bennelong Haven. Pre and post session evaluation forms were used to assess improvement in oral health awareness and behaviour following the assessment and oral health education session. Statistics on attendance patterns were obtained from the practice management software, ISOH (Information System for Oral Health).

**Results:** There were 85 adults and 20 children who attended the sessions.

Of these:

- 70% of clients reported improved oral health behaviours
- 80% of clients reported improved awareness of oral health needs of their children
- 20.83% of men, 50.79% of women and 50% of children in Kempsey missed or cancelled their subsequent appointments compared with 42.86% of men, 40.63% of women and 29.41% of children in Port Macquarie and 21.28% of men and 26.09% of women from Bennelong Haven.

**Conclusions:** Oral health programs among OTP clients are of great value in improving oral health awareness in this population. Males and institutionalised OTP clients demonstrated better dental appointment compliance on average than females and non-institutionalised OTP clients.

**Implications:** While this study shows that oral health assessment and treatment programs would be more effective for Aboriginal clients from rehabilitation centres, more work needs to be done to study and understand the gender difference in appointment compliance.

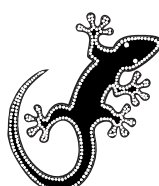
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## Introduction

Drug abuse is a significant issue for society with drug-related crimes continuing to be a significant social problem. Oral hygiene goes way down the priority list for these people and while drug users are an at-risk group with regards to oral health, their dependants are at a higher risk because of sub-standard diet and oral hygiene practices due to their parents' dysfunctional state during their period of addiction. Drug abuse in Aboriginal families would be expected to have a more deleterious effect on the oral health of their families than it would in non-Aboriginal families, because the level of baseline risk for dental diseases is higher among Aboriginal communities. Various studies including the second National oral health survey (2004-2006) have shown that Aboriginal Australians have poorer oral health when compared to other Australians [1]. A recent study has established that the oral health related quality of life in Aboriginal Australians was poor with all risk factors (socio-economic, dental service utilisation, financial and dental self-care factors) amenable to change [2]. Methadone users often have very severe dental pathology (including periodontal disease) at younger ages when compared to the general population [3,4]. High rates of caries exist among people with opiate dependencies due to a complex, dynamic combination of diet and other factors [5]. They exhibit heightened dental fear [6]. Opiate treatment program (OTP) clients in Port Macquarie and Kempsey, especially Aboriginal clients, demonstrated a lack of knowledge of good oral hygiene practices, lack of awareness of their own dental condition and lack of understanding of the criteria for public dental services, placing them and their dependants at a very high risk for oral disease. OTP clients commonly present as dental emergencies.

Approximately 10% of OTP clients in Port Macquarie and 25% in Kempsey are Aboriginal. OTP clients often contact dental services for emergency dental treatment, mostly when it is too late and there are no other systematic approaches to their problem. In this study a systematic approach to dental health education was tailored to OTP clients in Port Macquarie and Kempsey. The specific aim of this study was to determine whether an oral health promotion program accompanied by assessment and comprehensive dental treatment would improve oral health awareness and behaviours. The study also examined compliance with dental appointments among OTP clients.

## Method

*Smile wide with pride* was a project proposed by the Hastings Macleay Network to use funds available for projects amongst indigenous people to educate Aboriginal OTP clients about oral health. The project group, consisting of the senior dental officer, clinic coordinator, senior dental therapist and Kempsey senior dental assistant, had planning meetings with drug and alcohol staff, including the doctor that OTP clients consulted, and also

with the CEO of Durri Aboriginal Medical Services. These meetings imparted considerable depth to the planning process. The goals and strategies of the program developed following this planning process are summarised in Table 1.

*Table 1. Goals and strategies of the program*

Goals	Strategies
Improve awareness among Aboriginal OTP clients about their and their dependants' oral health needs	Instruct Aboriginal OTP clients on good oral hygiene practices for themselves and their dependants
	Provide oral health information to dependants
Create a referral pathway for Aboriginal OTP clients and their families and treat them in NCAHS Oral Health Clinics	Perform oral health checks among clients and their dependants and provide follow up treatment as necessary
Ensure Drug and Alcohol staff provide updated oral health information to their clients	Provide updated oral health information to Drug and Alcohol staff

An oral health program based on the National Institute of Drug Abuse recommendation of an individualised care plan constituting regular dental appointments, use of fluoride products, dietary advice and sialogogues (to increase the flow of saliva) [7] was implemented for Aboriginal people who attended the Port Macquarie and Kempsey OTP.

The original plan was to meet the OTP clients in the doctor's waiting room, provide them with oral health information, do a 'Lift the lip' check on their teeth and invite them to our clinics. This was later reviewed and the decision was made to have group sessions in the Network dental clinics with a presentation in the adjoining meeting room. This enabled a proper dental assessment and reappointment of each client.

As the health workers that the OTP clients had the most contact with were Drug and Alcohol staff, it was necessary to educate the Drug and Alcohol staff in the provision of oral health information. One oral health update session each was conducted by a dental officer among Drug and Alcohol staff in Kempsey and Port Macquarie.

## Resources

Funding was provided by the Centre for Oral Health Strategy (COHS) through the Oral Health Promotion Demonstration Grant. COHS also provided all the oral hygiene kits to be distributed to clients. The dental staff members of Kempsey and Port Macquarie, consisting of dentists, dental therapists and dental assistants, organised and conducted the oral health sessions. Drug and Alcohol staff advertised and provided refreshments at most of the sessions.

## Sessions

The sessions were conducted in the Kempsey and Port Macquarie dental clinics with oral health education sessions conducted in the adjoining meeting rooms. The presentation for the second session in Port Macquarie was arranged in the dental waiting room.

Each client was given a pre-evaluation survey and a consent form to be filled before their assessment. Clients who attended two sessions were given post-evaluation surveys in their second session. All except two, of the adult clients were on Centrelink support. Centrelink status of the child clients were not recorded as children only need Medicare cards to access NSW public dental clinics.

Following advice from Drug and Alcohol that clients would attend in ones and twos, rather than together at the same time, the project team consisting of dentists, dental therapists and dental assistants scheduled the oral health education segment in the middle of the whole session, doing check-ups before and after it. The oral health presentations were very interactive and clients, especially the bigger audience in Kempsey including clients from the rehabilitation centre Bennelong Haven, were receptive to the information.

## Treatment appointments

It was decided to provide all clients and their families with follow up appointments immediately after the initial assessment to avoid the risk of losing these clients. The assessing dental officer discussed the treatment plan with the client and obtained informed consent. Comprehensive dental treatment with oral hygiene reinforcement and an oral health kit containing a toothbrush, toothpaste, dental floss, oral health education and smoking cessation brochures and dry mouth products, was provided to clients and their families. Additional toothbrushes, toothpastes, dental floss etc were provided upon patients' requests.

## Partners

Drug and Alcohol and the Durri Aboriginal Medical Services were partners in the program. Drug and Alcohol staff provided significant advice on the conduct of the program, advertised the sessions and provided refreshments at most of the sessions. The project group effected a liaison between Drug and Alcohol and Wrigleys for the continued supply of sialagogues in the form of sugar free chewing gum to clients through Drug and Alcohol. Durri provided a lot of advice and encouragement for the program.

## Community involvement

Team members of the four public dental clinics in the Hastings Macleay Network were actively involved in the program. They warmly welcomed the opportunity to prevent and intercept dental

problems in the OTP community before they became severe and led to all sorts of problems, including at times, incidents of aggression at the clinics.. The first session was attended by, the environmental health officer, Public Health Unit, and the health promotion coordinator, Rural Primary Health Service, who gave a *Mister germ hygiene and nutrition* program talk about washing hands and general hygiene.

## Study design

Pre and post session evaluation forms were used to assess improvement in oral health awareness and behavior following the assessment and oral health education session. Statistics on attendance patterns were obtained from the public dental practice management software, ISOH (Information System for Oral Health). Attendance patterns of clients from the rehabilitation centre Bennelong Haven near Kempsey were recorded separately to the rest of the clients as they were transported by the centre bus for appointments.

## Results

In total the sessions were attended by 85 adults and 20 children.

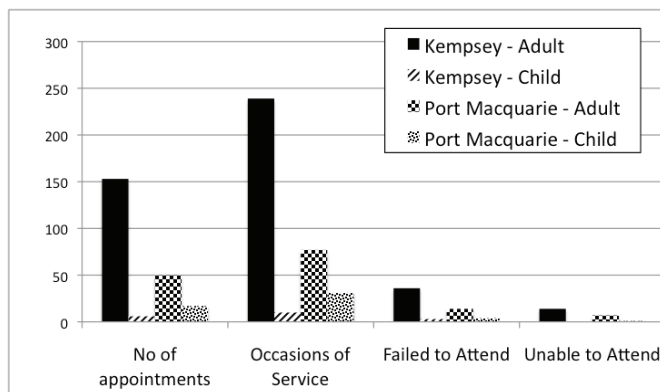
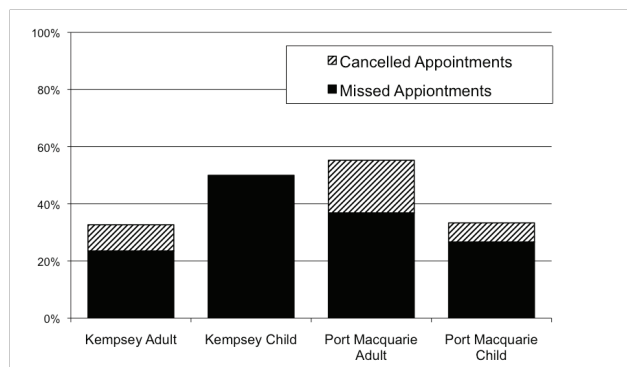
### **Improve awareness among Aboriginal OTP clients about their and their dependants' oral health needs**

There were 67 people attending the different sessions at Kempsey and 18 at Port Macquarie along with 17 children in Kempsey, and 3 in Port Macquarie. Further treatment appointments were given to 2 children in Kempsey and 3 children in Port Macquarie. Ten clients attended more than one session. Pre and post session surveys showed that 70% of these 10 clients reported improved oral hygiene behaviours and 80% of these clients reported increased awareness of oral health needs of their children.

### **Create a referral pathway for Aboriginal OTP clients and their families and treat them in NCAHS Oral Health Clinics**

Clients were at first waitlisted for further treatment. Very soon, this became direct follow-up treatment appointments following the initial assessment. Clients requiring dentures were placed on the appropriate denture waiting lists. Two clients were referred on to the oral surgeon for specialist treatment.

It was found that 20.83% of men, 50.79% of women and 50% of children in Kempsey missed or cancelled their subsequent appointments compared to 42.86% of men, 40.63% of women and 29.41% of children in Port Macquarie and 21.28% of men and 26.09% of women from Bennelong Haven. The percentage of missed appointments on average was higher for Port Macquarie and Kempsey clients (30.77%) than Bennelong clients (23.68%) and higher for females (39.57%) than males (28.32) (Figure 2).

**Figure 1: Attendance patterns****Figure 2: Percentage of missed appointments**

### Ensure Drug and Alcohol staff provide updated oral health information to their clients

One information session each was conducted for Drug and Alcohol staff in Kempsey and Port Macquarie. Four staff members in Kempsey and 10 staff members in Port Macquarie attended the sessions. The feedback from these sessions was very positive.

## Discussion

A number of research studies have recommended dental intervention among OTP clients and trialed different models for this intervention [8,9,10,11,12]. This study was the first to examine dental attendance patterns of OTP clients undergoing comprehensive dental treatment. While the challenges of dealing with OTP clients are complex, they become labyrinthine when dealing with Aboriginal OTP clients. Separating Aboriginal clients from other OTP clients was difficult and getting them to attend sessions without their non-Aboriginal peers was challenging. It was decided to include all OTP clients in the expansion of this program. The majority of the large number of clients attending the sessions in Kempsey was from the rehabilitation centre Bennelong Haven. As these clients were brought in the centre bus for appointments, the percentage of missed appointments on average was less for these clients than the non-institutionalised clients in Kempsey and Port Macquarie. When Drug and Alcohol were informed of the large number of missed appointments, Drug and Alcohol staff case

managed appointments and anecdotally this led to a reduction in missed appointments. This could indicate that OTP client oral health assessment and treatment programs would have better attendance rates when conducted in liaison with rehabilitation centres. A number of studies have supported integrating oral health programs into other services provided for people with addictions [13,14,15]. While it has been shown that case management is successful in assessing the dental needs of OTP clients (16), it would also be beneficial to assess the effective involvement of Drug and Alcohol case workers in future programs, given their pivotal role in reminding clients of sessions and treatment appointments. The gender difference in appointment compliance rates was similar to another study in rural Australia [17], but not to an overseas study [18]. It is hoped that future oral health programs among people with addictions would examine this more.

Some of the products mentioned in the education sessions are unaffordable to OTP clients, almost all of them being on Centrelink support. Therefore, it was decided to provide more expensive but useful products like tooth mousse in the oral hygiene kits.

## Conclusion

Oral health programs among OTP clients are of great value in improving oral health awareness in this population. This work becomes more effective when liaised with rehabilitation centres. This study provides evidence that dental appointment compliance rates were better in institutionalised clients than in non-institutionalised clients. More work needs to be done to study and analyse the gender differences in compliance rates that were observed in this study. Involvement of Drug and Alcohol case workers would be of value in reducing missed appointments. Oral health programs should supply the clients with all the dental care resources they would require.

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## Acclamations

In the Mid North Coast Local Health District Awards 2011, this program was a winner in the category 'Being ready for new risks and opportunities', and also the winner of the Overall Award.

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## Attachment 1

Table 1. Post evaluation survey results

Question	No of improved responses	No of respondents	Percentage
Increase in frequency of tooth brushing	8	10	80%
Increase in daily water intake	7	10	70%
Increase in rinsing after dosing	6	10	60%
Average improved oral health behaviour	7	10	70%
Increased frequency of dependent tooth brushing	8	10	80%

Table 2. Participants evaluation following D&A presentation

Overall evaluation of the workshop	Excellent	Very good	Good	Poor
Workshop organisation	4	5	1	
Workshop content	5	4	1	
How confident are you to...	Very	Confident	Somewhat	Not confident
Talk about oral health issues with your clients	4	6		
Advise clients on practical methods for maintaining good oral health	6	4		
Provide clients with information on accessing dental services	4	6		

Table 3. Frequency distribution

Age	Port Macquarie		Kempsey		Bennelong		Total
	Males	Females	Males	Females	Males	Females	
0-9 years	1	1		1	1	1	5
10-19 years	2		1			1	4
20-29 years		1		1	4	3	9
30-39 years	2	3	1	6	2	1	15
40-49 years		1	3	2	3	3	12
50-59 years	1		2		2		5
Total	6	6	7	10	12	9	50

## Attachment 2



### **Pre-Evaluation Survey**

*Thank you for taking part in our free dental program.  
Please take a few minutes to complete this survey.*

1. Have you been to a dentist in the last 12 months? (tick one box only) Yes No

2. How would you rate your Dental Health;

a. Before you began using any substances? (tick one box only)

Excellent Very Good Good Fair Poor Don't know

b. Before you began using substances regularly?

Excellent Very Good Good Fair Poor Don't know

c. Now?

Excellent Very Good Good Fair Poor Don't know

3. Briefly describe what dental problem you have (if any). *Please print*

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5. How often do you feel uncomfortable about the appearance of your teeth, mouth or dentures during the last 12 months (tick one box only)

Very often Often Sometimes Hardly ever Never

6. Do you use your own..... (Tick one or more boxes)

Toothbrush Fluoride toothpaste Dental Floss Water Bottle

7. How often do you usually brush your teeth? (Tick one box only)

Three times a day or more A few times a week or less Twice a day  
Once a day. Don't brush

8. How much water do you drink during a typical day? (Tick one box only)

8 or more glasses 5-7 glasses 2-4 glasses less than 2 glasses

9. How often do you rinse your mouth with water after dosing?(Tick one box only)


Always Most times Sometimes Rarely Very rarely Never

**Thank you for taking the time to fill in our survey.**



**Post-Evaluation Survey**

*Thank you for taking part in our free dental program  
Please take a few minutes to complete this survey*

1. How do you rate your dental health? (Tick one box only)  
Excellent    Very Good    Good    Fair    Poor    Don't know
  
2. How often do you feel uncomfortable about the appearance of your teeth, mouth or dentures during the last 6 months (tick one box only)  
Very often    Often    Sometimes    Hardly ever    Never
  
3. Do you use your own \_\_\_\_\_ (Tick one or more box)  
 Toothbrush    Fluoride toothpaste    Dental Floss    Water Bottle
  
5. How often do you usually brush your teeth? (Tick one box only)  
Three times a day or more    A few times a week or less    Twice a day  
Once a day.    Don't brush
  
6. How much water do you drink during a typical day? (Tick one box only)  
8 or more glasses    5-7 glasses    2-4 glasses    less than 2 glasses
  
7. How often do you rinse your mouth with a glass of water after dosing?  
Always    Most times    Sometimes    Rarely    Very rarely    Never
  
8. While participating in the Smile Wide with Pride program, did you receive advice about any of the following? (Tick one or more boxes)  
Tooth brushing    Using Fluoride toothpaste    Drinking water    Healthy diet  
Quitting smoking    Flossing    Sugar-Free Gum
  
9. How satisfied are you with the dental information you received from the 'Smile Wide with Pride' Program?  
(Tick one box only)  
Very satisfied    Satisfied    Neither satisfied nor dissatisfied    Dissatisfied    Very dissatisfied

If you answered 'Dissatisfied' or 'Very dissatisfied' please briefly tell us why. *Please print*

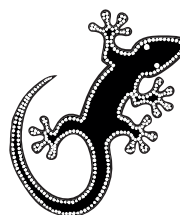
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**Thank you for taking the time to fill in our survey**





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