

## A Health Promoting Community Dental Service in Melbourne, Australia.

# THE NRCH-OH MODEL OF ORAL HEALTH CARE

### INTRODUCTION

Despite the best efforts and commitment of oral health programs, there is no evidence of a reduction in oral diseases and corresponding dental treatment required by the Australian community. In fact, Australian evidence indicates the oral health of the community could be getting worse,<sup>1</sup> particularly among children, with caries prevalence increasing by 26% among 6-year-olds and 14% among 12-year-olds (Spencer 2008). However concurrently, a 60% increase was observed in the number of disease free children, which indicates that dental caries is increasingly concentrated in certain sections of the community that are considered to be at high risk to dental caries.<sup>2</sup>

The current model of oral health service delivery in Australia needs to change for several reasons:

1. Population demographics are rapidly changing with a projected increase in Australia's population by 56% in 2056; increasing overseas migration; and the doubling of the proportion of people over 65 years by 2056.<sup>3</sup> There is concern that these demographic changes will put immense and unsustainable pressure on an already overextended health care system.<sup>5</sup> A key challenge will be to manage noncommunicable diseases, that are more prevalent among the elderly (65+ years), such as oral diseases, diabetes, heart, stroke and vascular diseases; arthritis; cancers; and hypertension.<sup>6</sup> In addition, dementia is a significant health issue among older Australians, with the prevalence expected to double by 2050.<sup>7</sup> The presence of oral diseases greatly affects the management of these chronic non-communicable diseases. Evidence shows that people visit the dentist more often as they grow older.<sup>8</sup> Oral health significantly impacts overall health and quality of life and is a key factor for healthy ageing.<sup>9</sup> It is well documented that newly arrived refugees and migrants are also at a greater risk of oral diseases due to their socio-cultural-economic-environmental backgrounds.<sup>10</sup> Dental services need to be prepared for these challenges and opportunities that will accompany the projected change in demographics by re-orienting their service delivery models of care,<sup>11</sup> especially if effectiveness and efficiency is to be maintained in the financially constrained public dental service environment.<sup>12</sup>
2. The focus is on managing the symptoms of the oral disease rather than managing the disease itself. It is now well understood that the traditional surgical model of oral health care will never successfully manage the disease itself. The focus on symptomatic surgical treatment of presenting disease pathology (such as cavities) has moved dentistry, away from managing the disease. As a result oral diseases and the disparities in disease levels between population subgroups continue to be highly prevalent.

A study by Nandanovsky & Sheiham (1995), showed that dental services explained only about 3% of the differences in change in 12-year-old caries levels across several countries.<sup>13</sup> Socio-economic factors had the largest impact independent of the use of fluoridated toothpaste. Hence, for effective disease management and sustained oral health outcomes, it is necessary to manage underlying risk factors as well as the disease presentation. It is proposed that a risk-based minimally-invasive oral disease management model of care may lead to a sustainable benefit to the oral health status of the individual and community group.<sup>14</sup>

3. The chances of success in reducing risk of oral disease is greatly increased by considering the common oral diseases to be “behavioural diseases with a bacterial component”;<sup>15</sup> thereby, making personal behaviour change key in management strategies. Dental awareness programs need to focus not only on the individual behaviour but take an all-inclusive approach which considers their environment, their health status and family health behaviour. Therefore to be effective, an oral health promotion program must meet the needs of each community group as well as consider individual prevention strategies delivered in ways appropriate and acceptable to each family and community group (family-centred care). The Victorian Oral Health Promotion Plan 2013-17 encourages health promoting practice models and the greater use of appropriately trained dental assistants in these practice models.<sup>16</sup>

The purpose of this document is to describe the model of oral healthcare, at the publically funded North Richmond Community Health’s Oral Health program (NRCH-OH MoC), in terms of its intellectual and operational aspects. While relatively easy to describe the operational aspects, embedding the shared understanding into practice, within the everyday clinical situation is more challenging. An important component of this model is to promote, within the dental team, a positive attitude to change, create a learning environment and develop a shared vision. The process of refining and integrating this model of care into daily practice is ongoing through action research based on staff and client feedback, regular group discussion and integrating an evaluation system to monitor the model’s performance.

## **PROGRAM PHILOSOPHY, THEORY AND PRINCIPLES**

The development of the NRCH OH MoC was guided by assumptions that are conducive to good health:

- a) If clients are empowered to look after their own oral health effectively then this would translate into better oral health outcomes, more successful treatment outcomes and more efficient management of health services. However, changing unhealthy behaviour can be a challenging, time consuming process that requires specialist techniques such as motivation interviewing.<sup>17</sup>
- b) Relates to client need, that is, the service providers should cater to the client’s need rather than only what the clinician determines as being important for the client (client-centred care).

- c) Relates to the second, in that clients should have input into their oral healthcare plan. This encourages equal partnership in the decision process, addresses the power dynamic and gives the client a sense of ownership and control over their health. This assumption also relates to the community-based participatory approach to research (CBPR) and is believed to encourage sustainability of healthy practices.<sup>18</sup>

The theoretical frameworks that informed this model of care included:

1. The Health Belief Model (HBM) “If individuals regard themselves as susceptible to a condition, believe that condition would have potentially serious consequences, believe that a course of action available to them would be beneficial in reducing either their susceptibility to or severity of the condition, and believe the anticipated benefits of taking action outweigh the barriers to (or costs of) action, they are likely to take action that they believe will reduce their risks”.<sup>19</sup> The key concepts in HBM are: perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action and self-efficacy.<sup>19</sup>
2. The Community Organisation and Community Building Theory (COCBT) which was used to guide the re-orientation of the health service towards a more preventive minimally invasive approach to disease management. The ‘community’ in this instance reflects the health service and its various operational aspects including but not limited to: service accessibility, service quality, client health outcomes, service economics, organisation policy, workforce and workforce structure. Key concepts for this theoretical model include: empowerment, critical consciousness, community capacity, social capital, issue selection, and participation and relevance.<sup>19</sup>

The principles guiding the NRCH OH MoC are:

- Client and family centred approach,
- Team-based care,
- Innovative use of staff and resources,
- Health promotion,
- Prevention,
- Risk-based access and
- Periodic program evaluation.

## **PROGRAM OPERATING CONTEXT**

**Public dental services:** Public dental services in Australia are provided, to eligible low income individuals and pre-determined priority groups, by each State through a combined State and Commonwealth funding systems and partnership agreements.<sup>21</sup> However, eligibility criteria as well as administration of services varies between States.<sup>22</sup> Dental Health Services Victoria (DHSV), funded by the State Department of Health and Human Services, administers public dental services in Victoria via the Royal Dental Hospital and also by sub-contracting to community health services<sup>23</sup> such as NRCH. The introduction of the National Health Care reforms has resulted in a range of changes to how dental health services are

funded within Australia; they are supported through the Council of Australian Governments (COAG). DHSV's discussion paper on Innovative Models of Care was an inspiration to re-orient the NRCH-OH MoC towards prevention and health promotion.<sup>12</sup>

**Economics:** The allocation to the Victorian public dental services is fixed each year by Treasury with DHSV redirecting an amount to each dental agency based on the number of effective full time equivalent (EFT) dental practitioners employed and predicted achievement of the year's productivity targets. This output based system uses clinical item codes, which are nominated a proportion of a funding unit known as Dental Weighted Activity Unit (DWAU). Each DWAU is funded at a given dollar value set by the State Government and the funds are then distributed to the dental program based on their total monthly clinical output. Benchmarks are set by DHSV with dentists and therapists expected to achieve a predetermined amount of DWAUs per year. However, the nominated DWAU to items codes is biased towards restorative and prosthetic activities rather than preventive activity and therefore the challenge for financial sustainability is significant when operating under a preventive model of care. The funding of DWAU is however the same whoever is legitimately "charging" through to DHSV therefore matching the appropriate operator to the activity is critical in terms of cost benefit for a particular model of care. This model of care therefore works best using an all-of-team approach with the dentist as leader. This is supported by Australian Health Practitioner Regulation Agency (AHPRA) through a Structured Professional Relationship in which each practitioner works independently within their individual scope of practice/ competency and refer within the team when work outside their scope is required.<sup>24</sup> For example an oral health therapist or hygienist working within a structured professional relationship can examine, diagnose including risk assessment and then construct a preventive based management plan; a dental assistant trained in oral health promotion can provide oral health education on direction by a dental practitioner.

Clients attending public dental programs in Victoria are encouraged to contribute to their oral health care. Co-payments were introduced in to Victoria's public dental program in 1997 and are currently set at \$27 per visit and capped at \$108 for a course of care (Exemptions are available for eligible children up to the age of 18 years, clients with significant mental health issue, refugees and asylum seekers, Aborigines and Torres Strait Islanders Individual community health services have flexibility to waive co-payments; however the collection of co-payments is factored into the annual funding allocation by DHSV.

**Traditional models of oral healthcare:** Traditional models of oral healthcare have focused on the surgical management of existing pathology in a tertiary prevention or downstream approach. This approach does not manage the dental disease itself and, therefore, has had minimal effect on the rate of hospitalisation, the inequitable distribution of dental diseases and waiting list times for treatment in public dental services.<sup>13, 25, 26</sup> At present, this model

still defines the majority of dentistry performed globally including Australia and especially in the majority of private practices. For both providers and consumers there will be considerable challenges to move from this surgical based program funded to manage disease symptoms by “fixing teeth” to a health promotion and prevention based model of care.

## **PROGRAM POLICIES AND PROCEDURES**

Implementation of the NRCH-OH MoC is informed by range of policies and procedures such as:

- Prioritising access for high risk individuals and groups
- Providing new clients, who go on the waiting list, with basic information on tooth brushing
- Provision of oral health education, including individualised oral hygiene instruction by a specially trained dental assistant, to all high risk clients.
- Achievement of a minimum standard of home care, as determined by client plaque scores, before proceeding to other phases of care
- Provision of minimal invasive dentistry including Caries management by risk assessment (CAMBRA)
- All children recalls are based on a risk assessment of future disease
- All adult recalls and reviews are based on a risk assessment of future disease
- Drop-in clinics are made available to all clients
- The approach being that only those who can wait are placed onto a waiting list.

## **PROGRAM OPERATIONAL COMPONENTS**

### ***The Assessment Phase***

1. All new clients and clients off the waiting list attend for an assessment with a dental practitioner. This is initiated via a letter of offer to clients inviting them to attend for an assessment of their oral health needs. Front desk staff, supports the new client through this process and may need to reinforce and explain the team approach during registration. Priority and groups at high risk to dental disease (including those clients who are “fast tracked”, such as family members of a person at high risk or a visitor identified by a staff member as potentially at high risk) are given the next available appointment, ie they are not placed on a wait list.
2. A preclinical interview is conducted on all new clients and clients on high risk recall preferably in a private consulting room where medical, dental, family/social history and dietary information is collected and recorded. It is important to gain, through discussion, an initial insight into the clients’ expectation at this stage. The dental assistant, from the most appropriate cultural group or who is familiar with specific client health beliefs, will greet the client, conduct this interview in the client’s first language if appropriate and continue to support the client throughout their episode of care.

3. Undertake a full clinical and radiographic assessment. A modified caries risk assessment tool, based on CAMBRA, is used to record information and to assign the client to a caries risk level.<sup>15</sup> This is stored in the electronic client records database and is available for comparison at subsequent visits. Risk for periodontal disease is assessed using a clinically determined CPI score.<sup>27</sup> The client is given a risk rating based on extreme/high/low dental caries: high/low periodontal disease. At this point it will be discussed whether time will be spent on oral health education or a follow up appointment given with the dental practitioner
4. Discuss the client's risk category, management planning and priority setting with the client.
5. Future appointments made, oral hygiene aids and home care products are issued as required.

In all cases, the oral health management plan is co-designed with the client, as informed consent, negotiated expectations and compliance are critical for achieving improved oral health outcomes. Oral health management plans may change as risk factors reduce, which can be an additional motivating influence for improved oral hygiene and diet modification with the client. It is expected that when families are involved, a family-based management plan will be required. The whole dental team may be involved depending on the risk and needs of the client and their family.

**Oral Health Education** (for those at High Risk to dental disease only): The oral health education session, a unique feature of this model, is conducted by dental assistants with special training in oral health promotion (Certificate IV), which qualifies them as an oral health educator (OHE). All clients assessed as high risk for either caries, periodontal disease or both are referred to the OHE, who reviews the client's pre-clinical interview questionnaire and handover notes from the dental practitioner to determine relevant factors contributing to the client's high risk status. They then provide tailored education sessions which include: plaque and saliva testing; instruction on the use of preventive products (high fluoride tooth paste, bioavailable calcium and phosphate releasing paste); dietary analysis and advice; and review and follow-up. Saliva and plaque scores, when indicated or suggested by the dental practitioner, are conducted by the OHE and contribute to the clients' understanding of their risk. These sessions are conducted in a collaborative approach in which goals for change are agreed upon together. All high risk clients must demonstrate a good level of oral hygiene prior to the next phase of their management plan. The number of review visits required to achieve this is determined by the OHE in negotiation with the client, and when appropriate the reviews visits may be combined with other dental visits. Reviews are set by the OHE based on factors such as health literacy, competency, motivation, medical history, and family and home factors.

**Client and family centred approach to care:** Waiting lists are an unfortunate reality of resource constrained public oral health services and it is common feedback that clients feel "neglected" or "forgotten" while on long waiting lists. Clients are therefore engaged while on the waiting list with each new client registering for the waiting list sent an information

letter containing basic oral hygiene information. These and other documents, were developed and tested as part of a lead-in to this MoC, and were informed by recent research on people waiting for public dental care in Melbourne.<sup>25</sup> It is important that clients are prepared for the NRCH approach and especially made aware that some aspects of their care may be delayed until they demonstrates a minimum standard of oral hygiene. This message is delivered at least three times via:

- Information sheets, which are mailed to all new clients as they go onto the waiting list. Basic oral hygiene information and an invitation to attend oral hygiene classes with OHE are also included.
- Another letter is sent with an appointment date/time when the client reaches the top of the waiting list. Information on fees, payment policy and a registration/medical history form is also included.
- This message is again reinforced at the preclinical interview with the dental assistant,.
- Reinforcement of this information is also provided by the dental practitioner during the management planning discussion with the client.

***Dental Team-Based Care:*** The team consists of:

- Reception and Management personnel
- Dental Assistants Certificate III (DA) - chairside assisting
- Dental Assistants Certificate IV (OHE)- Oral Health Educators
- Dental Practitioners: Dentists, Oral Health Therapists, Dental Therapists, Hygienists, and Denture Prosthetists

The reception team is the starting point of the client experience and a welcoming and respectful client-focused approach is expected. A well-presented, tidy, informative, welcome area (as opposed to waiting area) is available to clients prior to entering the clinical area. Oral health information is constantly presented on the television in the welcome area. Information sheets, forms and procedures, supporting the preventive based model, are translated into appropriate languages and available in the welcome area. Coordination between the clinical and reception staff is essential. An example of such cooperation is when a client seeks clarification, complains or questions information provided by clinic staff, the reception staff will inform clinic staff that the client has not fully understood their management plan or preventive information. The Reception Team is also trained and expected to reinforce information and provide recommendations on the use of home products, such as: high fluoride toothpaste, Bioavailable calcium and phosphate releasing paste, fluoride mouth rinses and Chlorhexidine rinse/gel.

The significance of utilising appropriately trained dental assistants in this model is related to their relative cost benefit, improved work satisfaction and career development. They primarily assist with language, culture and counter any power differentials between clients and other members of the dental team, the dental assistant often from the same community/language group is far less threatening and may have advantages communicating with that client. Dental assistants receive training on interviewing and health coaching

techniques with the aim to support and improve the clients' experience. In the NRCH-OH MoC DA's have an increased role in *assisting the client* by greeting, assistance with form filling, and guiding and supporting them through their experience enhancing the client centred approach.

The use of dental assistants trained in oral health promotion is a unique feature of this model. NRCH-OH encourages all dental assistants to complete a certificate IV training in oral health promotion, which is a 12 month part-time course conducted by RMIT University. Those qualified work under direction of the dental practitioner in the clinical setting as an oral health educator (OHE), to provide within their scope of practice: oral hygiene instruction; plaque and saliva testing; instruction on the use of preventive products (tooth paste, Bioavailable calcium and phosphate releasing paste, mouthwash); dietary analysis and advice; and review and follow-up.

Dentists at NRCH-OH are recruited for their commitment to the public health approach and undergo orientation in the NRCH-OH MoC. In this new model, they are the leaders of the team, provide critical and intellectual input and support to the team. Although clients may see other members of the team during their management, the overall responsibility for the oral health management plan - including formulation, implementation and review as appropriate to individual client needs, is with the dentist as team leader.

The greater emphasis on prevention during training makes hygienists, oral health and dental therapists ideally suited to the preventive based approach. Scope of service varies depending on when and where they were trained. It is important that all work is performed within that scope especially when adult care is provided. NRCH-OH has increasingly utilised therapists and hygienist to support this approach.

***Innovative use of staff and resources:*** The innovative use of staff and resources associated with this model of care are as follows:

- Reception staff are empowered to invite clients, whom they suspect to be at high risk to dental disease, to make an appointment, rather than assigning them arbitrarily to a waitlist. Reception staff are also trained to provide information and recommendations on home care and home care products.
- Dental assistants are recognised as being there to assist the client.
- The co-payment is waived for specific oral health education appointments for clients who attend this service.
- Clinicians are utilised to their full scope of practice.

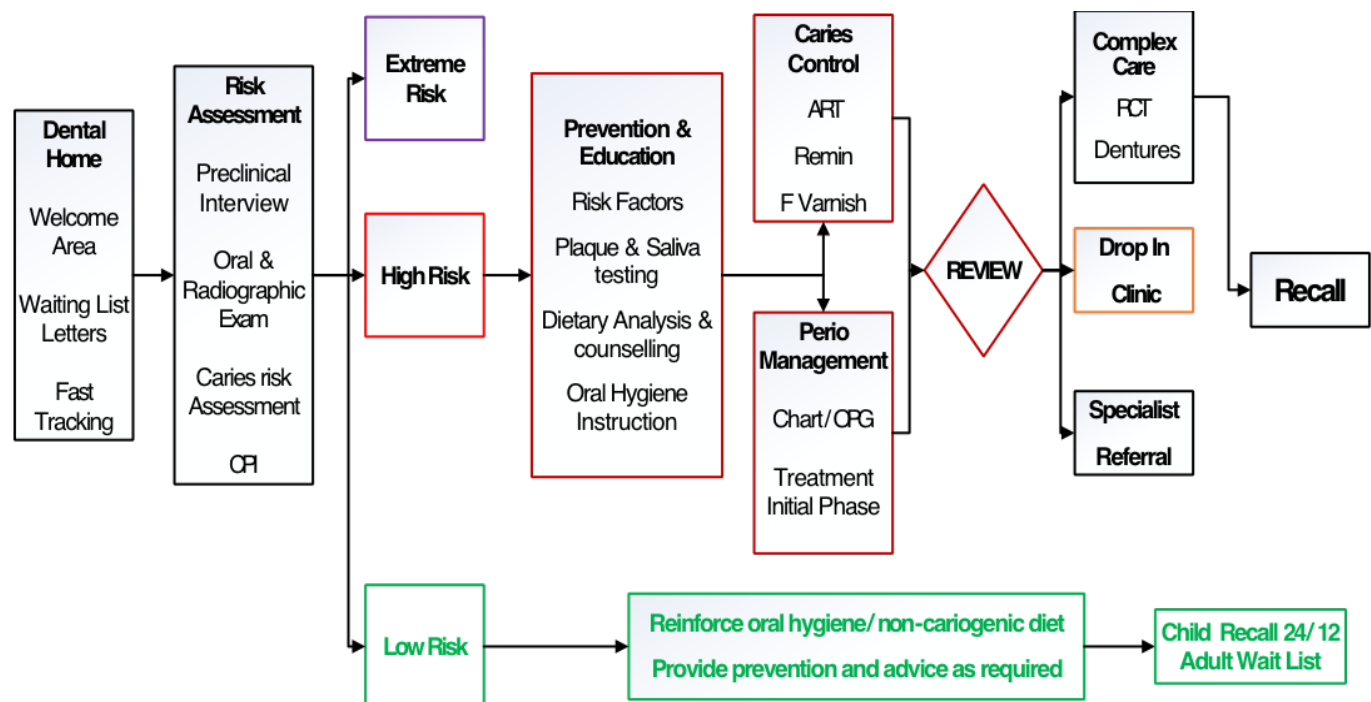
***Training for Staff:*** There are a range of training initiatives offered in this MoC. These range from cultural competency, motivational interviewing techniques, health coaching, risk assessment, prevention, and oral healthcare products. Over 60% of NRCH-OH clients come from culturally and linguistically diverse (CaLD) communities. An understanding of cultural beliefs is very important and all staff at NRCH participate in cultural competency training. The Centre of Culture Ethnicity and Health (CEH) a program of NRCH, advises and supports



clinical programs to reduce cultural barriers to care and improve health literacy. NRCH has information available in community languages and the oral health team includes members that represent the dominant local community groups (Sudanese, Eritrean, Vietnamese, Chinese, Serbian, Greek and East Timorese). Most staff have direct experience with the refugee/migrant experience.

**Dental service access pathways:** Figure 1 illustrates how a client flows through the NRCH-OH MoC. The disease management pathway is determined by the client’s assessed risk status. Clients assessed as being at ‘Extreme risk’ of oral diseases, such as those with complex medical conditions, are managed via a senior dentist working with a selected sub team including, when appropriate, specialists at the Dental Hospital. Drop in clinics or ad hoc emergency visits are available to those rare clients who do not want to participate in this model of care. This usually becomes apparent at the assessment and management planning stage or when the client fails to attend for OHE appointment(s). It will however be made clear by all team members as a duty of care that these clients are required to demonstrate a good level of home care prior to approval for complex dental care (endodontic, fixed and removable prosthetic care) and referral to specialist clinics. It is important that clients understand why some treatment is not performed and how it can be unprofessional to proceed with treatment while disease remains active.

FIGURE 1: Flow of clients through the NRCH-OH MoC



**Risk assessment:** NRCH-OH aims to have a consistent approach to detecting oral diseases, predicting future disease, management planning and setting of appropriate recalls. This is

done using a risk-based management system that provides care to those who need it the most, while reassuring and supporting those who do not. Examples, of each level of risk are provided in Table 1.

Assessment of risk offers the dental practitioner information on the likelihood of a client developing future oral disease, progression of the disease and whether the recall/review interval should be adjusted. It also assists clients in understanding the risk factors responsible for their disease, which may enable them to take actions to reduce their risk. Assessment of individual risk is dependent upon the diagnosis of existing disease activity and the level of information collected on all known risk factors. As stated earlier, caries risk is assessed using a modified version of CAMBRA and periodontal risk using the CPI index. However, as the evidence to support existing risk assessment tools is not clear,<sup>28</sup> the risk assessment instruments in our model are used to support an intellectual process, while a clinical position on risk is achieved.

Various risk categories will result in differing management plans (Table 2) which may be obvious and straightforward. In some cases, management plans will take longer to be developed and may involve a further period of assessment prior to finalising a definitive plan. All high risk clients spend time with the OHE, starting at the assessment visit if possible, otherwise an appointment is made for oral health education, dietary counselling and introduction to home care products. When the OHE is satisfied the client has moved or is moving into a lower risk category an appointment with a dental practitioner will be made.

***Disease management:*** Management is based on risk with higher risk clients having more intense management.

### **Extreme risk (CE)**

Clients who are undergoing head and neck radiotherapy, cancer therapy, major social or mental disability, chronic substance abuse, Sjogren's syndrome, uncontrolled diabetes etc., require specialised care and a senior dentist must be consulted in the management plan. These clients will, in general, have xerostomia. A more integrated plan and specialised management will usually be required to address these clients' ongoing risk and treatment needs. Recalls and reviews for this category is mostly determined on a case-by case basis. Short-term expectations and outcomes will vary for these clients depending on the risk factors involved; however, it is unlikely that these client's will move to a lower risk category given their special circumstances.

### **High Caries/High Perio Management (C1P1)**

- Preventive Phase: The OHE manages the oral hygiene and dietary risk factors. An oral hygiene plan is developed with the client and includes monitoring, plaque scores, oral hygiene instruction, and nutritional and quit smoking advice with additional dedicated smoking cessation staff available on referral.

- Periodontal management requires full charting and initial supragingival debridement by the hygienist. A specialist periodontist referral is included as appropriate.
- Caries control: The dental practitioner may choose stabilisation of active carious lesions via Atraumatic Restorative Treatment - ART and/or application of silver diamine fluoride (SDF) during this initial preventive phase.
- The OHE reviews the client for ongoing dietary analysis and nutritional support and when plaque scores meet minimum standards refers to the dental practitioner.
- Restorative and prosthetic phases. The dental practitioner has the option to return the client to the OHE for further visits or can opt to continue to finish depending on client's compliance.
- Further reviews take place with the OHE and/or short recall with the dental practitioner.

#### **High Caries/ Low Perio Management (C1P2)**

- Preventive Phase: The OHE manages the oral hygiene and diet risk factors. An oral hygiene plan is developed with the client.
- Caries control: Dental Operator may choose stabilisation, ART, SDF during the initial preventive phase.
- The OHE reviews client for ongoing dietary analysis and nutritional support and when plaque scores meet minimum standards refers to the dental practitioner.
- Restorative and prosthetic phases. The dental practitioner has the option to return the client to the OHE for further visits or can opt to continue to finish
- Further reviews take place with the OHE and/or short recall with the dental practitioner.

#### **Low Caries/ High Perio Management (C2P1)**

- Any routine restorative work is performed.
- Preventive Phase: managed by the OHE.
- Periodontal management requires full charting and initial supragingival debridement by the hygienist. A specialist periodontist referral is included as appropriate.
- Further reviews take place with OHE and/or short recall with the dental practitioner.

#### **Low Caries/ Low Perio Management (C2P2)**

- The dental practitioner develops a management plan with the client.

Table 2: Management strategies by risk status.

Code	Description	OH Educator	Restorative	Periodontal	Prosthetic	Recall
CE	Extreme	Depends on risk factors	Caries Control/ART	Depends on risk factors	Full denture	Ongoing or ad hoc
C1P1	High Caries High Perio	OH education Plaque scores Saliva Testing QUIT Reviews	Caries Control/ART until risk reduced  Routine care & MID	Perio Chart/OPG Initial therapy Referral RMDH	Only when maintaining adequate OH	6-12 months
C1P2	High Caries Low Perio	OH Education Plaque scores Saliva Testing Reviews	Caries Control/ART until risk reduced  Routine care & MID	Routine scale and clean	Only when maintaining adequate OH	6-12 months
C2P1	Low Caries High Perio	OH Education Plaque scores QUIT Reviews	Routine care & MID	Perio Chart/OPG Initial therapy Referral RMDH	Only when maintaining adequate OH	6-12 months
C2P2	Low Caries Low Perio	No	Routine care & MID	Routine scale and clean	Yes	Onto waiting list after 12 months.

**Recalls and reviews:** The frequency and type of oral health care a client needs depends on the likelihood of disease developing. The ability to assign an appropriate recall interval will improve over time as the dental practitioner builds an accurate picture of the client and determines the rate at which disease is progressing.

- Records will not exist for new or recent clients, and there may be some uncertainty about what recall interval is appropriate. In these cases a conservative review interval (6-12months) is assigned and progressively altered over time on the basis of the risk assessment performed at each assessment visit. For example, how can it be determined if a ‘white spot lesion’ in a new client has recently appeared or has been present without progressing for years? An appropriate course of action is to take a clinical photograph, apply topical fluoride, give preventive advice and assign a short review interval to monitor the lesion. If the lesion fails to progress over time, the review interval can be increased. Government policy dictates that all children will be assigned a risk status that automatically determines recall settings at low, moderate and high risk (24, 18 & 12 months). The NRCH MoC prefers to commit to either high or low risk to avoid clients delegated to the “safe option” of the moderate classification. It is advisable to inform a

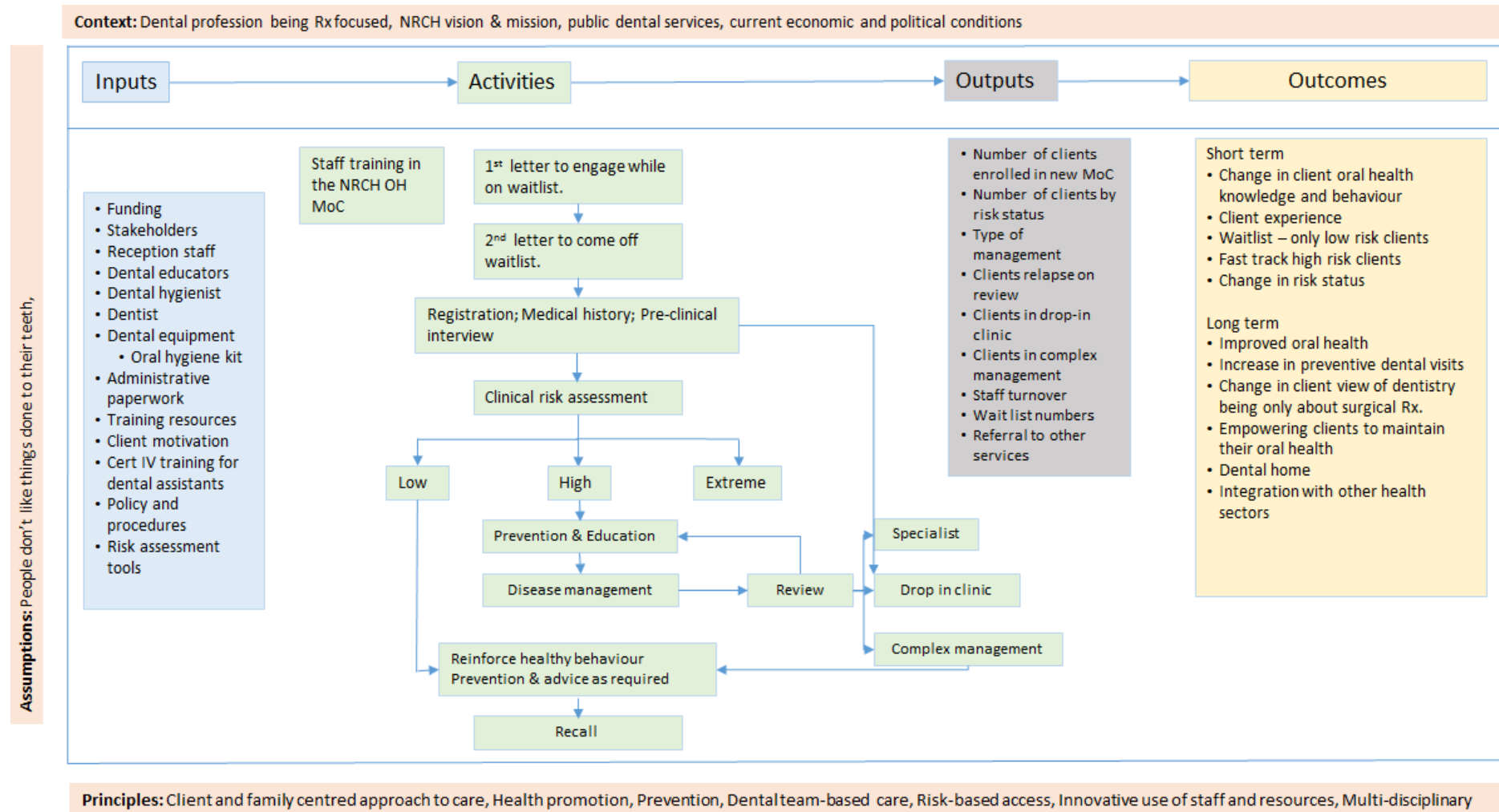
child as well as their parents, guardians or caregivers that the same interval may not be appropriate at every stage of their life – it will vary if their risk and protective factors alter.

- In an effort to be family-centred, families are recalled together using the child with the highest risk rather than unnecessarily separating the family. There are advantages when educational advice is given in a family group as a common understanding is more likely and repetition is avoided. Adults are assessed along with their children which enables families to plan and receive their management in a consolidated way.
- Adult recalls can be a contentious issue and Government policy is that adults are not recalled but that they should approach the service in 12 months to go onto the waiting list, which can be at least another 12 months wait. However, in the preventive minimally-invasive NRCH-OH MoC, which involves MID approach to active carious lesions, duty of care requires that clients return for regular checks to monitor arresting and remineralisation of those lesions, periodontal healing and reinforcing oral hygiene information. It is within this duty of care to follow-up with these clients until their risk status drops to low risk. Therefore, recall periods determined by mutual agreement with high risk clients and dental practitioners are used. NRCH-OH takes the responsibility to contact clients placed on recall inviting them to attend.

For adults, reviews are not intended for full examinations or specific treatment planning. The Titanium data base has provision for adult reviews and can be used for high risk clients involved in an individual prevention program.

**Program evaluation** - Ongoing and methodologically sound evaluation is necessary to determine the worth of any program or policy. Program evaluation specifically aims to understand what works, for whom and in what context and is guided by the program logic model (Fig. 2).<sup>30</sup> Process and outcome evaluation (including economics) approaches will be used to study the NRCH-OH MoC. Process evaluation, is an ongoing approach that, helps determine if the program is being implemented as planned and identifies components of the program that could be modified for improved efficiency and effectiveness. Outcome evaluation helps determine if the program is achieving its intended goals and objectives.<sup>30</sup>

Figure 2: Program Logic Model



## DISCUSSION AND CONCLUSION

There will be many challenges and complexities to overcome, when delivering a new model of care. Public oral health programs, including NRCH OH operate on a limited budget and programs need to be dynamic and innovative to ensure efficient and cost-effective use of these limited funds. Using first principle of quality of care in the most appropriate model of care. The NRCH-OH program achieves this by utilising: public health principles, oral health promotion strategies, innovative use of staff, risk-based management and minimally invasive dentistry; yet, the program continues to be challenged with a finite budget. As a result the program is always exploring ways to deliver high value outcomes within those budgetary constraints.

The current public dental service system in Australia is output driven, and there is no evidence that this system and associated policies are delivering the intended health outcomes. To ensure high value services, new models of oral health care will need to move away from being output driven to one that focuses on value and outcomes<sup>31</sup>. Achieving positive health outcomes in the most cost-effective approach should be the end goal for any health service provider, yet, outcomes are rarely measured or reported on and existing services tend to be output and target driven<sup>31</sup>. In addition, with costs and expenditures for health care increasing<sup>32</sup>, it is necessary for services to remain viable and efficient by delivering the best outcomes at the least cost<sup>33</sup>. In an outcome focused community health system this can be achieved using a client-centered approach, where the aim is to support and enable people with high levels of clinical need to improve their health literacy and ability to take care of their health.

This will also require integration with other health and care providers to ensure the best client outcomes<sup>31</sup>.

Efficiency and effectiveness in the health care system can be improved by the innovative use of modern information technology<sup>34</sup>, with application such as: electronic record systems, handheld electronic devices, electronics to support clinical decision making, practice-based data for research to build evidence-base, advanced data analytics to inform decision making and electronic patient self-monitoring systems<sup>34</sup>. The health service delivery system will need to adapt to and adopt these new information technologies to be relevant to the times, and to ensure that clients are receiving the best value care possible.

There will also be considerable challenges and complexities to re-orient the dental system away from the traditional surgical model of care to a more preventive-based approach. Some key barriers to this change are: economics, lack of time, education system focused on surgical intervention, healthcare systems oriented towards surgical intervention, and peer's opinion valued higher than research<sup>35,36</sup>. Research has also shown, that while practitioners are good at attending professional development opportunities, they take a long time to implement innovative evidence-informed practices<sup>37,38</sup>.

It is time for change, and the Oral Health Program at North Richmond Community Health looks forward to addressing some of these challenges through the next phase in the development and refinement of this model of care, through an evaluation of the model's processes.

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