

ORAL HEALTH CARE FOR OLDER PEOPLE IN NSW

A toolkit for oral health and health service providers



CENTRE FOR ORAL HEALTH STRATEGY
NSW Ministry of Health
Locked Mail Bag 961
North Sydney NSW 2059

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DISCLAIMER

The information provided in this toolkit is evidence-based and current at the date of publishing. The NSW Government does not endorse any specific product brand.

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FOREWORD

In recent years there has been a trend for older people to retain a greater number of natural teeth as they age – a trend that will continue as younger generations age.

These teeth may have had significant treatment over a lifetime increasing the risk of complications and requiring a higher level of intervention and prevention. An increasing ageing society, with higher retention rates of natural teeth, will require new oral health promotion actions to be developed and implemented.


Oral Health Care for Older People in NSW: a toolkit for oral health and health service providers (The Toolkit) recognises that clinical conditions in older persons share risk factors and cross discipline-based boundaries because of their multifactorial nature. *The Toolkit* contains oral health information that can be useful in encouraging a partnership approach to the oral and general health needs of older people.

The Toolkit is not intended to give information or guidance about how to diagnose or treat older adults. Rather, it is a guide on how to prevent and minimise health problems associated with older people.

This document encourages: (i) shared responsibilities from all stakeholders; (ii) a commitment to best practice models based on evidence; and (iii) integration of oral health across programs and sectors of general health care and dental services.



Mr John Skinner
Director, Centre for Oral Health Strategy, NSW Ministry of Health



Professor Clive Wright
Associate Director, Centre for Education and Research on Ageing,
Concord Clinical School, the University of Sydney



Dr Deborah Cockrell
President, Australian Dental Association, NSW Branch

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- Centre for Education and Research on Ageing, Concord Clinical School, the University of Sydney
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- Australian Dental Association, NSW Branch.

Consultation:

- Marion Fisher, Outcomes Manager, Brain Injury Rehabilitation Directorate, Agency for Clinical Innovation and Brain Injury Rehabilitation Research Group
- Kristy Bartlett, Professional Services Dietitian, Dietitians Association of Australia
- Claire O'Connor, Rehabilitation Network Manager, Agency for Clinical Innovation
- Emma Campbell, Senior Speech Pathologist, Chronic and Complex Care, Nepean Blue Mountains Local Health District
- Pip Taylor, A/Manager Speech Pathology, Westmead Hospital
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Definitions:

Primary prevention: prevention of the onset of disease through risk education and health promotion.

Secondary prevention: Preventing the progression of disease.

Oral health and health service providers: In this document oral health and health service providers refers to oral health and health professionals who provide oral health care and 'general' health care to older people. This terminology is consistent with Alzheimer's Australia, Dementia Language Guidelines.¹

SECTION 1: INTRODUCTION



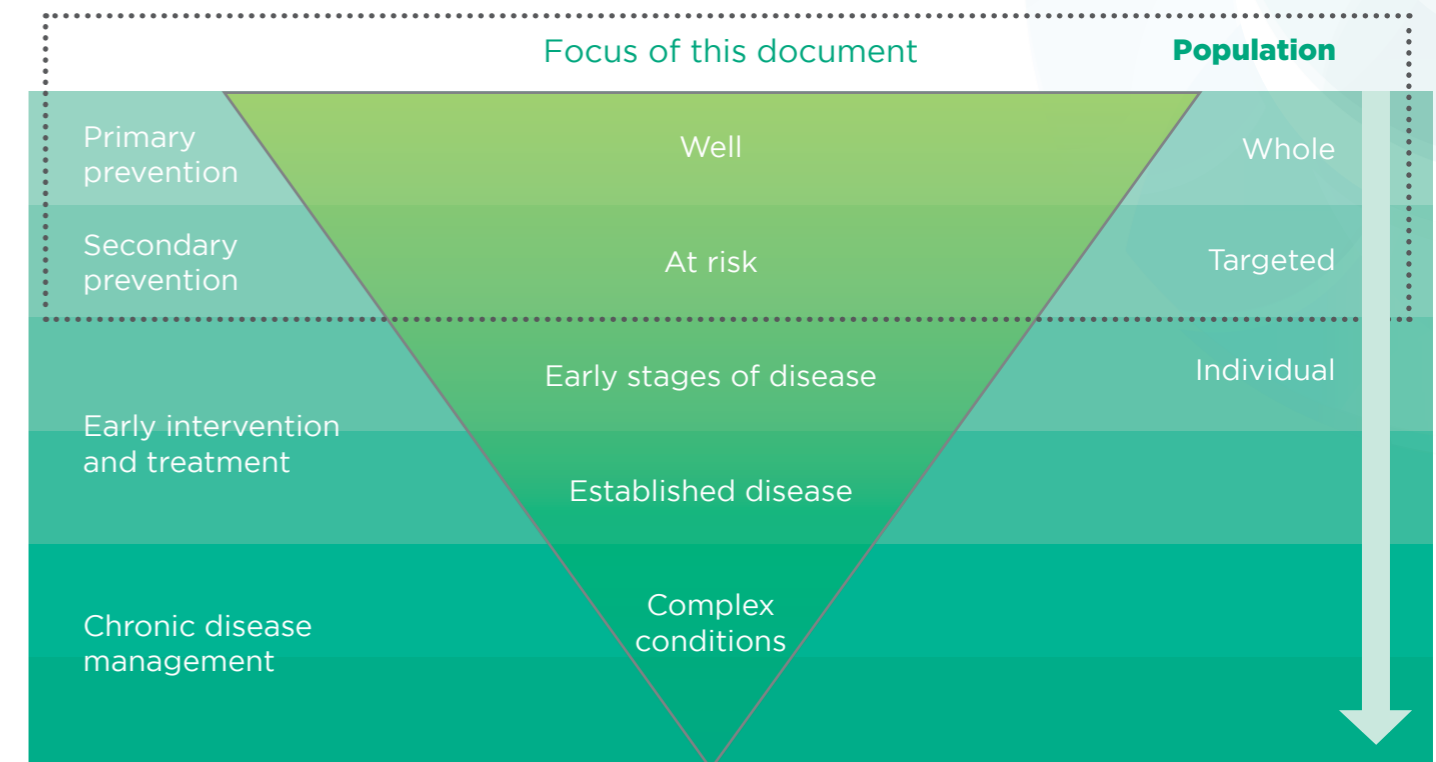
The NSW population is ageing and there is a trend towards the reduction in edentulism (complete tooth loss and replacement with dentures).

The consequences of increased tooth retention in older adults, combined with an increased proportion of people with complex medical needs in this age group, means new skills will be required by oral health and health service providers to manage these age-related disorders.

What is the purpose of *The Toolkit*?

The purpose of *Oral Health Care for Older People in NSW: a toolkit for oral health and health service providers (The Toolkit)* is to provide oral health information, aids and resources for oral health and health service providers in NSW to encourage a multi-disciplinary approach to the integration of oral health into health promotion initiatives for older people to help improve their oral health status and quality of life. The main focus of *The Toolkit* is on primary and secondary prevention as shown in Figure 1.

Figure 1: Focus of *Oral Health Care for Older People in NSW: a toolkit for oral health and health service providers*



Source: Adapted from Department of Health Victoria²

The Toolkit is one component of an aged care package for older people in NSW available from the Centre for Oral Health Strategy, NSW Ministry of Health. Other components include oral health information that can be used by volunteer peer educators, and family carers and support workers.

What is in *The Toolkit*?

The Toolkit contains the following information:

- theoretical models that support the importance of oral health and its integration into 'general' health preventive and clinical intervention that requires a multidisciplinary approach to addressing health issues of the elderly;
- preventive oral health messages for older people;
- important oral problems and conditions (dental caries, periodontal diseases, xerostomia, falls (potential trauma to the mouth), oral cancer); and
- practical information that may help prevent or minimise oral health problems associated with older people with functional or cognitive limitations.

The Toolkit **does not** provide or replace **specific oral health advice** required for an individual. The personal oral health needs and maintenance regimes of older people vary considerably depending on the makeup of the teeth, gums and mouth of an individual. Specific advice regarding the oral health needs of an individual requires an assessment by an oral health professional, especially where the person is frail or cognitively impaired.

The Toolkit uses boxes with 'notes' or 'cautions' to highlight areas where specific issues should be addressed thoughtfully in relationship to the overall health and well-being needs of an individual.

Note: All **dental practitioners** are members of the dental team and where there is a structured professional or referral relationship between dental practitioners the dentist is the clinical team leader.

(Scope of Practice Registration Standard, June 2014)

Who should use *The Toolkit*?

The Toolkit can be used by a broad section of oral health and health service providers who work with older people in a variety of settings, including community programs or residential care. It can be used in different ways by oral health and health service providers and people with organisation-wide responsibilities.

Oral health service providers can use *The Toolkit* as a stand-alone resource that will give them a 'how to' guide to minimising oral health decline in older people. Health service providers can use the guide to integrate oral health care into strategies that minimise functional and health decline in older people.

How can I use *The Toolkit*?

This manual is a hardcopy guide of *The Toolkit*. There is also a PowerPoint presentation that accompanies the manual. The presentation can be used by oral health professionals to increase the oral health knowledge and skills of health service providers.

All the resources contained within *The Toolkit* can be found at <http://www.health.nsw.gov.au/oralhealth/pages/default.aspx>.

Implementing *The Toolkit* - turning knowledge into practice

The Toolkit can be implemented in conjunction with:

- *Best Care for Older People Everywhere: The toolkit 2012*;
- *Better Oral Health in Residential Care* resources;
- *Care of Older People Toolkit*;
- *Oral Health Promotion Tutorials*;
- Oral health resources for older people by Dr Peter King and The *Australian Hygienists' Association of Australia SA Branch Inc*; and
- other aged care health strategies.

A comprehensive list of resources can be found in Appendix A

Note: A further **set of resources** is in preparation as an outcome of the Building Better Oral Health Communities Project, which is designed to support the home care workforce. For further information contact the SA Dental Service.

Policy Context

Oral health 2020: A Strategic Framework for Action in NSW³ sets the platform for oral health action in NSW into the next decade. The goals for oral health in NSW are to:

- Improve access to oral health services in NSW
- Reduce disparities in the oral health status of people in NSW
- Improve the oral health of the NSW population through primary prevention.

The Toolkit is closely aligned with National and State strategic directions for oral health of older people.



SECTION 2: ORAL HEALTH AND OLDER PEOPLE

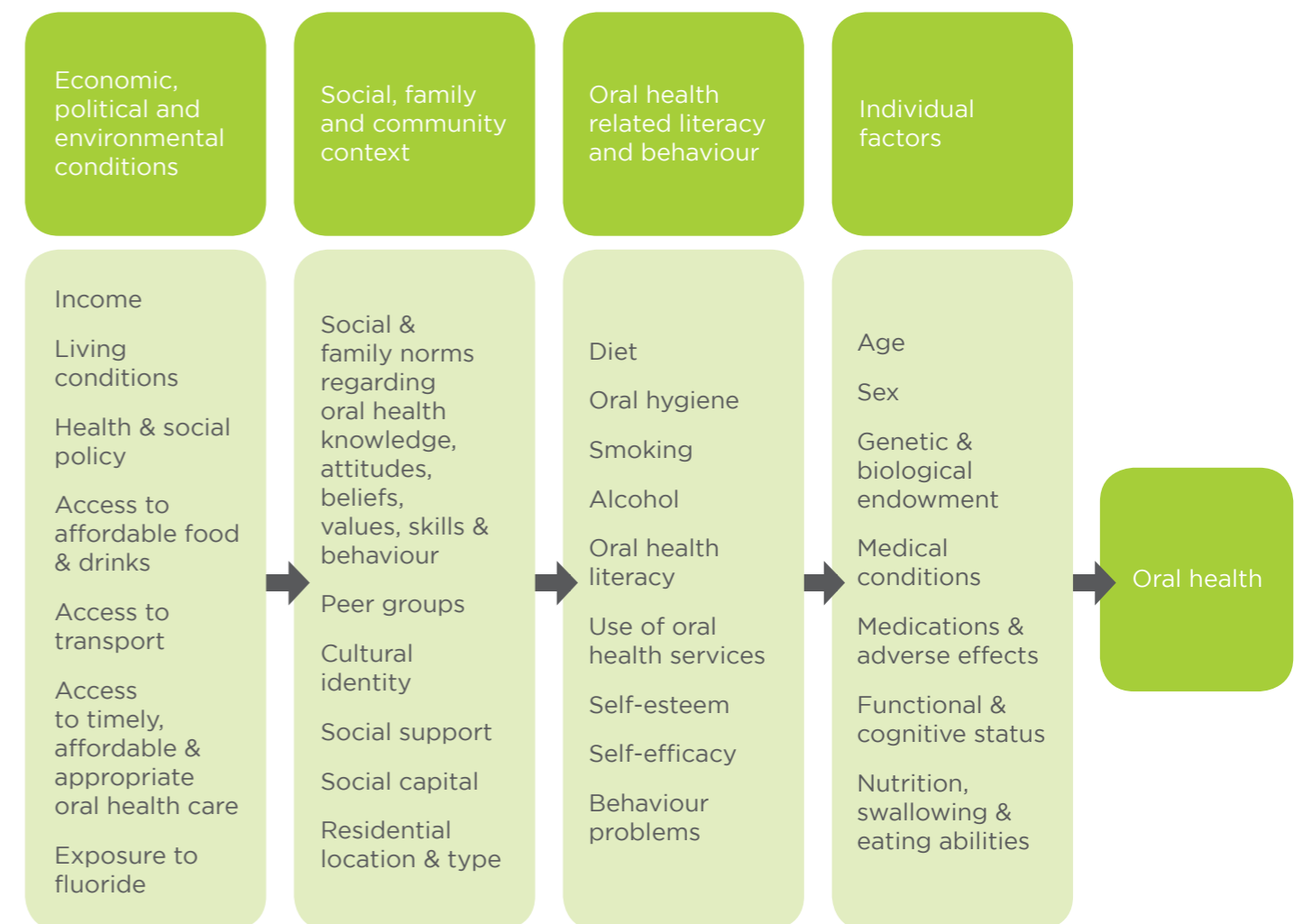
The life-stage of older adulthood has considerable variation depending on age and underlying genetic and medical conditions. Frailty, both physical and neurological, in older people represents the move from independence to dependence.

Ageing may mean an increase in the usage of prescription and non-prescription medicines that have side effects. This can impact on oral health as well as reduced capacity to perform oral hygiene on a daily basis. The risk of periodontal diseases also increases with age. Reduced income and affordability in retirement also increases the risk of oral disease.

2.1 DETERMINANTS OF ORAL HEALTH

The complexity of older adults' oral health status is reflected in a range of determinants for oral conditions. Figure 2 demonstrates how these determinants relate to the oral health status of older adults.⁴

Figure 2: Determinants of oral health on older people

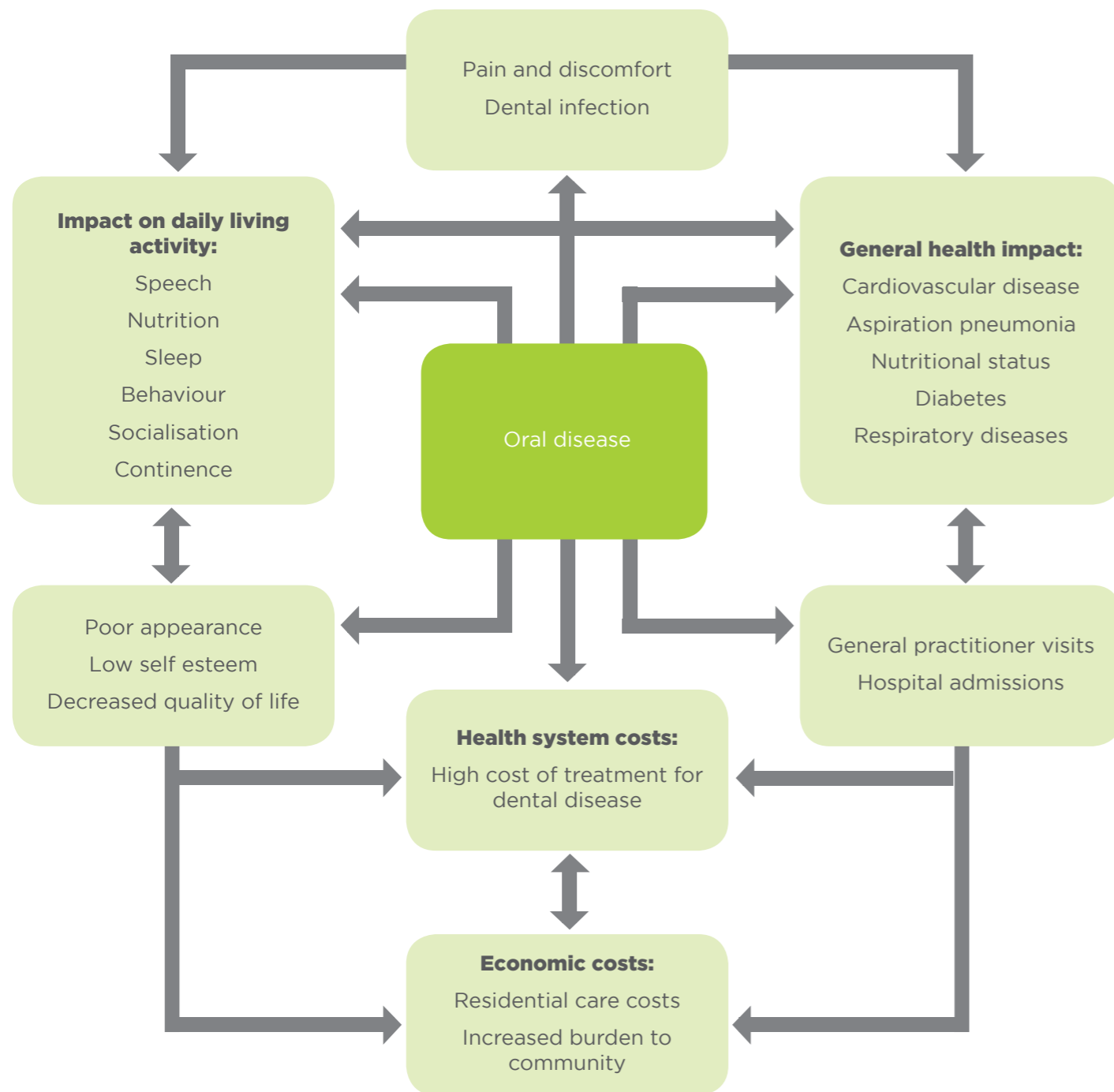


Source: Adapted from Watt and Fuller⁵ and Chalmers 2001

2.2 IMPACT OF ORAL DISEASE

Oral disease places a considerable burden on older people, their families and the community as shown in Figure 3. It affects individuals, their general health, functioning and quality of life, and the community through health system and economic costs.

Figure 3: Impact of oral disease in relation to older people



Source: Adapted from Rogers, 2011⁶

2.2.1 IMPACT ON GENERAL HEALTH

- Poor oral health is linked to increased risk of cardiovascular disease, stroke and aspiration pneumonia.⁷
- Chronic oral infection can complicate the medical management of health illnesses, such as diabetes, chronic heart failure, and respiratory diseases.⁷
- Dental problems in older people are a common cause of speech impairment, eating difficulties, pain when eating, and/or signs of mouth discomfort.⁷
- Tooth loss, poorly fitting dentures and oral infections can result in poor nutrition and persistent mouth pain – they can affect appetite, food enjoyment and ability to chew, which impacts on food intake and food selection.⁸
- Poor oral hygiene significantly increases the risk of patients with swallowing impairments (dysphagia) developing pneumonia.⁸

Note: If a person has any signs of **oral disease or dysfunction** that impact on their general health and well-being they should be referred to their oral health service provider.

2.2.2 IMPACT ON DAILY LIVING ACTIVITIES

At the individual level, poor oral health can go beyond infection and tooth loss and can include destruction and degeneration of the tissues of the mouth.⁹

- Poor oral health affects people's everyday lives by causing pain and suffering, disrupting sleep patterns, and affecting the ability to eat and speak, sleep well, socialise and feel happy with their appearance. This in turn affects self-esteem, social interaction, the ability to work, and reduced quality of life.¹⁰
- Older people may also have a range of health problems or disabilities that impact on their ability to care for their own oral health, which may be related to issues associated with:
 - cognitive impairment (such as, dementia, Alzheimers)
 - functional limitations (such as, hand and upper limb function due to poor dexterity, pain and strength)
 - functional problems (such as, mouth and tongue movements and swallowing difficulties).⁷
- Dental difficulties and dry mouth (xerostomia) are two of the main causes of speech impairment in older adults.⁸
- Oral pain and difficulty with eating can affect nutritional intake and body weight and therefore skin integrity, strength and mobility, and continence.⁷
- Chronic infection and oral pain may affect mood and behaviour, especially for people with dementia who find it difficult to self-report their pain and discomfort.⁷

Note: If a person has a **functional or cognitive dysfunction** that impacts on their ability to perform oral health tasks they should be referred to the appropriate health service provider.

2.2.3 ECONOMIC IMPACT

In 2010-12, total expenditure on dental services in Australia was \$8.3 billion. Compared to the broader health system, the total level of expenditure on oral health (either government or individually funded) has remained relatively unchanged, averaging 6.09% of total health expenditure per year since 2004.¹¹

2.3 ORAL HEALTH PROMOTION

The key to maintaining and improving the oral health status of older people is the use of oral health promotion strategies that focus on: (i) dental characteristics; (ii) life characteristics of older adults; and (iii) quality of life issues.¹²

Contemporary geriatric oral health promotion¹² needs to incorporate the treatment of oral diseases and conditions with a strong focus on prevention strategies using multi-disciplinary involvement of medical, health and dental professionals in varied settings.¹³ The principles of the Ottawa Charter can be utilized to develop a geriatric oral health promotion matrix of strategies for older adults, as demonstrated in Table 1.¹⁴

Table 1: Geriatric oral health promotion matrix for older adults

Principles of the Ottawa Charter	Functionality		
	Independent	Frail	Dependent
Build healthy public policy	Advocacy	Advocacy Protocols and standards	Advocacy Enforcement of standards
Create supportive environments	Fluoridation specific oral health information Private insurance	Dental aids Specific oral health information Private insurance	Dental aids Oral health education Private insurance
Strengthen community action	Oral health education Oral health assessment in general health assessment	Assessment and screening protocols	Dental assessment Guidelines Directories
Develop personal skills	Personalised skill development	Service provider skill development	Specific interventions by dental professionals Service provider skill development
Reorient health services	Minimal dental intervention Prevention	Domiciliary dental and portable services	Public and private preventive and treatment regimes

Source: Adapted from Wright and Harrison, 2002¹⁴



SECTION 3: PREVENTIVE ORAL HEALTH MESSAGES FOR OLDER ADULTS

A healthy mouth is essential for general health and wellbeing, enabling individuals to communicate effectively, and to eat and enjoy a variety of foods. It is important for overall quality of life, self-esteem and social confidence.¹⁵

Oral health care involves the consideration of the areas and conditions listed below:

1. lips
2. tongue
3. gums and mucosal tissues
4. saliva
5. natural teeth
6. dentures
7. oral cleanliness
8. dental pain.

3.1 5 MESSAGES FOR A HEALTHY MOUTH

There is a standard protective oral hygiene routine for older people based on the best ways (the best evidence base) to maintain a healthy mouth.

There are 5 easy to remember messages that are a simple guide to having a healthy mouth and maintaining good health.

- Eat Well
- Drink Well
- Clean Well
- Play Well
- Stay Well.

3.1.1 5 TIPS TO EAT WELL

Tooth decay is related more to the frequency of sugar intake, than the total amount of sugar eaten.

- Reduce the frequency of eating sticky and sugary foods – limit biscuits, cakes, sweets and other sugary foods.
- Eat a variety of nutritious snacks daily, like fruit, nuts and yoghurt. Care should be taken by people with dentures if eating nuts.
- Eat from each food group (vegetables, fruits, dairy, meat, cereals/grains) to support oral and general health.
- Eat fresh, crunchy foods like apples, celery and carrots. Slicing these foods can make for easier eating.
- Eat meals or snacks containing milk or cheese to help reduce acid that causes tooth decay.

CAUTION: If a person's food intake is of concern a referral to an Accredited Practising Dietitian should be undertaken to ensure any issues of **malnutrition** are addressed.



3.1.2 5 TIPS TO DRINK WELL

Fluoride in tap water helps to strengthen teeth and reduce acid that initiates tooth decay. Sugar is the source of bacterial energy in causing tooth decay

- Drink tap water daily – in most places in NSW tap water contains fluoride.
- Drink water after meals and snacks, and after taking medications (especially if they have been crushed and mixed with a sweetener).
- Keep the mouth moist by frequently rinsing or sipping with water.
- Avoid sugar in tea and coffee and reduce the intake of caffeine drinks.
- Limit the intake of acidic and sugary drinks (like fruit juice, soft drink and cordial).



CAUTION: If a person is on a **special diet** or has fluid intake restrictions they must comply with medical advice regarding water intake.

CAUTION: If a person is at risk of **dehydration** they should be referred to the appropriate health service provider.

3.1.3 5 TIPS TO CLEAN WELL

Poor oral hygiene allows the bacteria in dental plaque to produce acids and other substances that damage teeth, gums and surrounding bone. The daily removal of dental plaque and maintenance of sound dental health practices are the key aspects to preventing oral diseases.

Tooth brushing with a fluoride toothpaste is the most effective and economical method of physically removing dental plaque from gums, tongue, teeth and/or dentures. Fluoride protects natural teeth by remineralising and strengthening tooth enamel.

Natural teeth

- Brush morning and night, using a soft toothbrush on gums, tongue and teeth.
- Use a pea-size amount of standard fluoride toothpaste.
- Spit out residue toothpaste but do not rinse the mouth after brushing. This allows the fluoride to pass effectively into the teeth.
- Replace a toothbrush: (i) when the bristles become shaggy; (ii) every three months; and (iii) following an acute infection, such as thrush. This helps to prevent harm to the mouth.
- Use dental floss and interdental brushes (with care) to remove debris from between teeth.



Dentures

People who wear dentures are at risk of developing fungal infections. Fungal infections can be associated with: wearing dentures at night; poor cleanliness of dentures; denture plaque; deterioration to the denture resin; diet; and pre-existing general health factors, such as diabetes. Further, a scratched denture can be a source of irritation and increase the risk of oral infections.

- Clean dentures daily with a denture brush and liquid soap to remove plaque from all surfaces, then rinse well under running water.
- Do not use toothpaste as it is abrasive and can damage the denture surface.
- Hold the dentures carefully while brushing, and clean them in a bowl of water placed in a sink to protect from breakage if dropped.
- Brush gums and tongue with a standard toothbrush to remove plaque in the mouth.
- Remove dentures overnight and store in cold water. This allows gum tissue to rest.

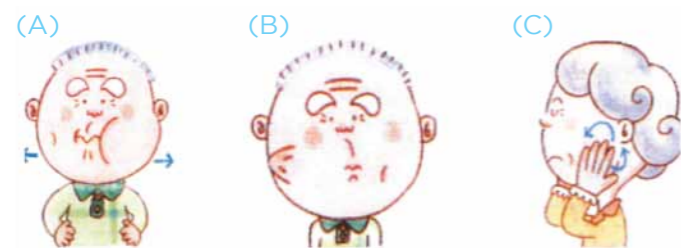
3.1.4 5 TIPS TO PLAY WELL

As with maintaining general health, exercise is important. Exercises for stronger cheek and tongue muscles and a healthy saliva flow help to maintain a moist mouth, as shown in Figure 4.

- Put air in the cheek and slide the mouth from side to side to exercise facial muscles (A).
- Run the tongue around the inside of the cheek to exercise the tongue muscles (B).
- Massage the sides of the face using a circular motion to improve saliva flow (C).
- Exercise facial and lip muscles by “oo” and “ee” movements of the lips.
- Mouth rinses and tongue cleaning may help keep your breath fresh.

CAUTION: If a person has problems with **lip or tongue function** they should be referred to an appropriate health service provider before carrying out an exercise program at home.

Figure 4: Mouth and cheek exercises



- (A) Facial exercises
- (B) Tongue exercises
- (C) Salivary glands

Source: “Oral health exercise” for vibrant senior life.ⁱ

ⁱCourtesy Chiyoko Hakuta & Kitahara Minoru. Department of Oral Health Promotion, Graduate School, Tokyo Medical and Dental University, Tokyo: Japan, 2008

3.1.5 5 TIPS TO STAY WELL

- Visit a dental professional regularly, even if you wear dentures. Everyone has different needs: talk with your oral health professional about how frequently you need to visit for a check-up.
- Protect the body from the sun with sunscreen, lip block, a hat, clothing, sunglasses.
- Use sugarless medicines, where possible.
- Use walking frames and do balancing exercises to reduce falls.
- Limit alcohol and don't smoke or chew tobacco - contact the Quitline 131 848 or a General Practitioner, dental professional or pharmacist to help with quitting.

Note: Older people may be at risk of **vitamin D deficiency**, which can increase the risk of fractures.

Refer to the **Australian Cancer Council** for guidance in finding the balance between sun protection and exposure for health.



SECTION 4: ORAL PROBLEMS AND DISEASES



Oral diseases and conditions are progressive and cumulative. If untreated they become more complex and costly over time. Some of the most important problems of the mouth are:

1. Dental caries (tooth decay)
2. Periodontal (gum) diseases
3. Xerostomia (dry mouth)
4. Trauma to the mouth (broken teeth)
5. Oral cancer.

Dental caries and periodontal diseases have historically been considered among the most important global oral health burdens¹⁶; these are largely preventable and reversible if identified and managed early.¹⁷ Oral diseases can be significantly reduced through: changes in diet; daily oral hygiene; quitting smoking; reducing alcohol consumption; limiting sugary and acidic beverages; access to fluoridated water and fluoride toothpaste; and changes in oral health behaviour.¹⁸

4.1 DENTAL CARIES (TOOTH DECAY) - 5 FACTS

Tooth decay is a diet and oral hygiene related disease that affects the teeth and causes pain.

- Tooth decay is the destruction of tooth structure and can affect both the enamel, which is the outer coating of the tooth, and the dentine or inner layer of the tooth.
- There are four main criteria required for tooth decay: a tooth (enamel or dentine), caries-causing bacteria, fermentable carbohydrates (such as sucrose), and time.¹⁹
- Tooth decay occurs when foods containing sugars and carbohydrates (such as, breads, cereals, soft drinks, fruits, cakes and sweets) pass over or are left on the teeth.
- Bacteria in the mouth digest these foods producing acids. The bacteria, acid, food debris and saliva combine to form plaque, which clings to the teeth and the acids quickly dissolve the minerals from the tooth enamel surface of the teeth.
- If this cycle continues without opportunity to replenish the minerals (which fluoride does) then a cavity may form in a tooth.



4.2 PERIODONTAL (GUM) DISEASES - 5 FACTS

- Gum diseases have been associated with general health problems such as, diabetes and increased risk of cardiovascular disease.
- The major local cause of gum disease is dental plaque, which is the sticky, colourless film containing bacteria, food debris and salivary products that build up on all surfaces of the teeth, dentures, gums and tongue.
- Bacteria found in dental plaque cause irritation of the gums that support the teeth. This can lead to inflammation and infection that can destroy gum and underlying bone.
- When dental plaque is not removed it may harden into calculus (tartar), which can only be removed by a dental professional.
- Periodontal diseases are highly associated with smoking and excess alcohol use.



4.3 XEROSTOMIA (DRY MOUTH) - 5 FACTS

- Ageing may be associated with reduced saliva and salivary gland hypo-function, and reduced salivary flow.²⁰
- Use of medications is associated with an increased incidence of dry mouth.
- Saliva has antibacterial properties. When the quantity and quality of saliva is reduced oral diseases can develop very quickly. Sugar-free chewing gum may assist in promoting saliva.
- Dry mouth is uncomfortable, unpleasant and can impair taste, chewing, swallowing and speech. It is associated with rapid dental decay in those with salivary gland hypo-function.
- Dry mouth is linked with increased risk of aspiration pneumonia. Regular mouth care from a dental professional has been shown to reduce pneumonia in older patients.^{21, 22, 23, 24}

Note: Products are available that can offset some of the effects of dry mouth.

4.4 FALLS (POTENTIAL TRAUMA TO THE MOUTH) - 5 FACTS

Falls are the leading cause of injury-related hospitalisations in NSW, accounting for around 30% of all such hospitalisations. In 2012-13, there were 56,609 fall-related hospitalisations of NSW residents. Older people have the highest rates of fall-related hospitalisations: almost 66% (37,126 hospitalisations) as demonstrated in Figure 5.

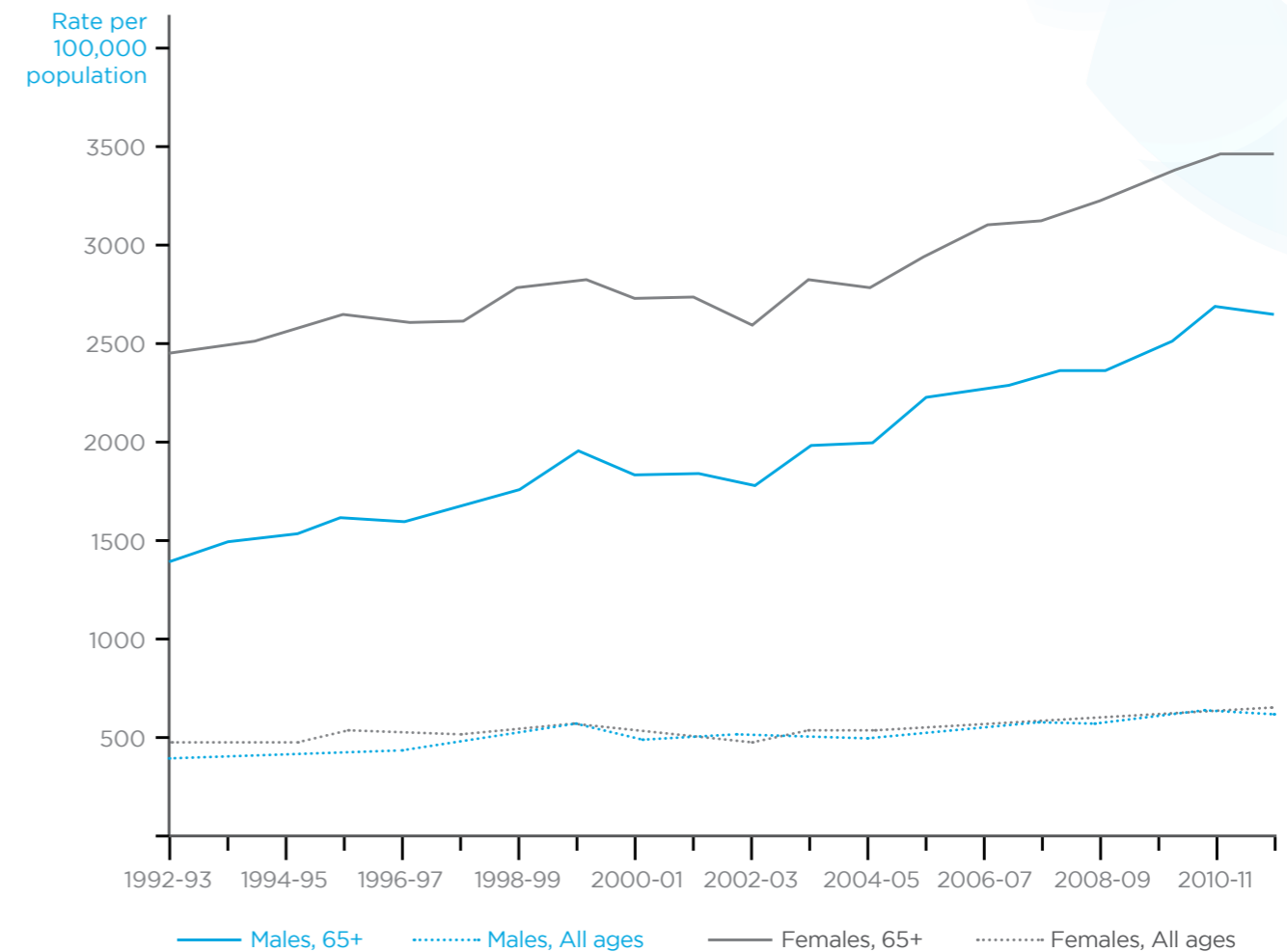
Fall-related hospitalisation rates increased from 1992-93 to 2012-13 by almost 53% in people aged 65 or older.²⁵

- Older people are more likely to suffer from chronic illnesses and experience acute health problems, such as cardiovascular disease, falls and fractures.²⁶

- Older adults may be more at risk of falls because of visual and hearing impairments.
- Poor nutritional status and illness can be a cause of muscle loss, which may result in decreased mobility, instability and falls.²⁷
- Older people who are frail and confused are at greater risk of falls, and functional decline and cognitive decline.²⁸
- Medications may be implicated in older patients presenting with falls, confusion and incontinence.²⁹

Figure 5: Falls related injury: overnight stay hospitalisations

Fall-related injury: overnight stay hospitalisations by sex, persons of all ages and 65 years and over, NSW 1992-93 to 2011-12



Source: NSW Health²⁵

4.5 ORAL CANCER

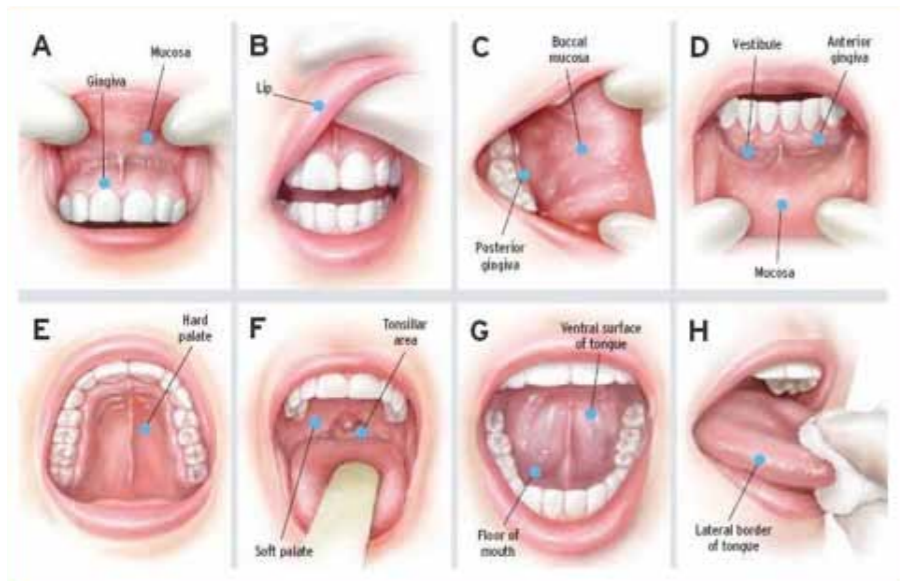
Mouth cancer usually starts in the cells lining the mouth. The most common sites are the lips, tongue and/or floor of the mouth. Smoking and drinking alcohol are known risk factors. Mouth cancer can be cured if treated in its earlier stages.

The symptoms of mouth cancer can include:

- A visible mass or lump that may or may not be painful.
- An ulcer that won't heal.
- A persistent blood blister.
- Bleeding from the mass or ulcer.
- Loss of sensation anywhere in the mouth.
- Trouble swallowing.
- Impaired tongue mobility.
- Difficulty moving the jaw.
- Speech changes, such as slurring or lack of clarity.
- Loose teeth and/or sore gums.
- Altered taste.
- Swollen lymph glands.³⁰

Figure 6: 8-Step oral cancer screening

THE 8-STEP ORAL CANCER SCREENING



Source: <http://franklindental.net/blog/oral-cancer-screening-8-steps-to-early-detection.html>

SECTION 5: ORAL HEALTH CARE AIDS



Oral health care for older adults is often complicated by a past dental history, including crown and bridge work, partial dentures and implants. It is further complicated by older people not recognising their continued risk of dental disease and not visiting an oral health professional in the absence of pain or a problem.³¹

As Australia's population ages the incidence of dementia will increase. In 2011, among Australians aged 65 years and over, almost 1 in 10 (9%) had dementia, and among those aged 85 years and over, 3 in 10 (30%) had dementia.³² This may affect the person's ability to carry out adequate daily oral hygiene.

This section provides practical information that may help prevent or minimise oral health problems associated with older people with functional or cognitive limitations. This does not replace the need for specific individual oral health care maintenance plans for individual needs.

Note: All **dental practitioners** are members of the dental team and where there is a structured professional or referral relationship between dental practitioners the dentist is the clinical team leader.

(Scope of Practice Registration Standard, June 2014)

5.1 REQUIREMENT FOR PROVISION OF DENTAL CARE

The following items are required to provide dental care to frail or dependent people in hospital or residential care settings:

- Sink / water
- Gloves, mask, eye/facial protection
- Gown
- Spray bottles
- Containers for dentures
- Labels for spray bottles and denture containers
- Denture brush
- Mild soap (for dentures)
- Disinfectant (for dentures)
- Soft toothbrush
- Standard (1000ppm – 1500ppm) toothpaste (for natural teeth).

Note: Detailed resources on **best practice** in oral health in residential aged care in Australia are available in Appendix A

5.2 ADDITIONAL ORAL CARE

Additional oral care management for older people who are frail or dependent may be required by an oral health professional, such as antifungal, antibiotic and pain medication, and a high fluoride (5000 ppm) toothpaste to therapeutically protect against tooth decay.

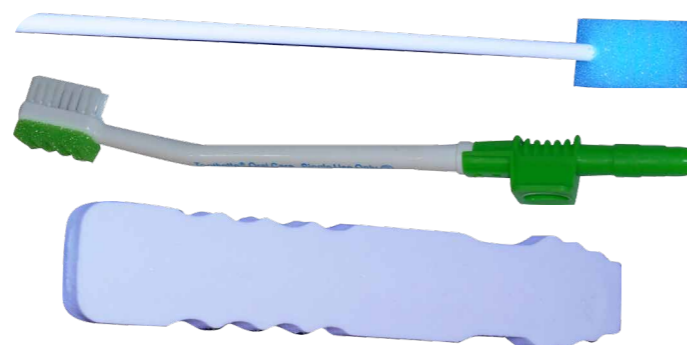
These older adults often require a multi-disciplinary approach that includes simple strategies to assess their oral health and provide oral health care. For example, consultations with geriatricians and other health professionals may lead to individualised special aids and techniques that can be used by service providers, such as:

- One-handed tooth-brushing techniques
- modified and suction toothbrushes
- floss / interdental brushes.



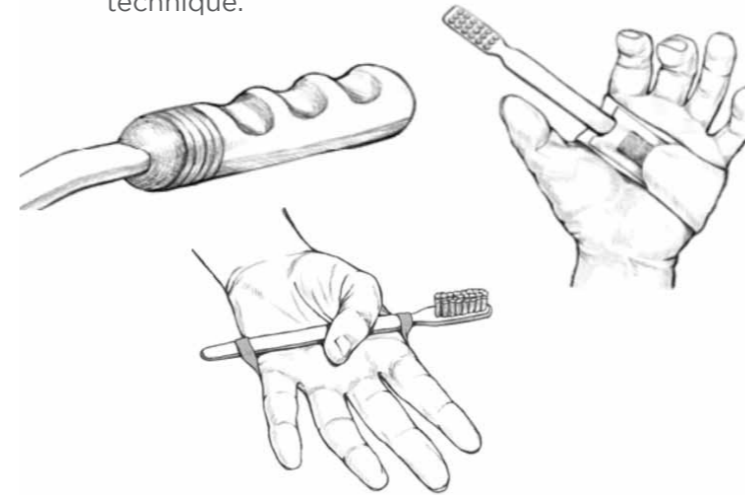
5.3 OTHER TOOTHBRUSHING AIDS

- Soft toothbrush suitable for bending
- Electric toothbrush
- Toothbrush with an enlarged handle
- Mouth props.



5.4 TECHNIQUES

- Attach a Velcro strap, elastic band or bike grip to a toothbrush.
- Use toothpaste with a small nozzle or a pump action dispenser.
- Apply toothpaste onto teeth using the wipe technique.



5.5 SALIVARY AIDS

Some salivary aids may help people with dry mouth.

- spray bottles for mouth rinses
- saliva substitutes
- use of chlorhexidine / bicarbonate swabs.

CAUTION: Some oral care products may exacerbate dry mouth and damage oral tissue. Unless otherwise directed **do not use** mouthwashes or swabs containing alcohol. Ensure **infection control** issues between clients are managed appropriately.

5.6 CHANGED BEHAVIOURS

Older people, especially those suffering dementia, confusion or Alzheimers, can behave in ways that are resistive to oral health care.

A changed behaviour is any behaviour that causes stress or distress to the person with the behaviour or any others interacting with them. It refers to people whose behaviours are associated with a decline in their cognitive capacity, generally due to dementia including associations with other medical conditions.

This behaviour may be displayed in the following ways:

- fear of being touched
- not opening the mouth
- not understanding or responding to directions
- biting the toothbrush
- grabbing or hitting out.

5.6.1 NSW HEALTH GUIDELINES

*Guidelines for Working with People with Challenging Behaviours in Residential Aged Care Facilities*³³ recommends using appropriate interventions and minimising restraint. It aims to improve long term care options for older people with severe behavioural and psychological symptoms associated with dementia and/or mental illness and support residential aged care service providers in providing quality care for their residents.

5.6.2 PHYSICAL RESTRAINT AS A MANAGEMENT STRATEGY

Physical restraint that is neither an adjunct to medical or dental treatment nor acceptable within urgent situations (such as, surgical procedures, patients harming themselves or others) requires the approval of a guardian empowered by the Guardianship Tribunal to give such approval.

ESSENTIAL

Toothbrushing or any oral health care intervention requires consent from the individual.

If a person is cognitively impaired consent is required by their **guardian**.

SECTION 6: ORAL HEALTH CHECKS

6.1 MOUTH CHECKS

The Oral Health Assessment Tool (Appendix B) can be used to assess any issues of concern, such as:



Lips:

Dryness, lumps, cracked corners, inflammation or abnormal colour.



Tongue:

Patchy, white coating or any redness or swelling.



Gums & oral tissue:

Ulcers, sores, swelling, redness or bleeding gums.



Teeth:

Worn down teeth, decay (black or brown spots), broken fillings, loose or broken teeth or exposed tooth roots, tooth sensitivity.



Dentures:

Cracks, breaks, worn areas, cleanliness, signs of irritation, chipped or broken teeth on denture, bent or broken metal wires or clips on partial denture.



Mouth and saliva:

Bad breath, dry oral tissues, oral pain, difficulty eating, swallowing or speaking, poor oral cleanliness and food left in mouth.

Saliva that is thick, stringy, rope like, sticky frothy, sticky bubbly or water clear saliva.

Note: The **Oral Health Assessment Tool** is used by service providers for residents in aged care facilities.

Note: If a person has a **functional or cognitive limitation** that impacts on their ability to perform oral health tasks they should be referred to the appropriate health service provider.

6.2 ORAL HEALTH SCREENING QUESTIONS

There is also a set of 6 oral health screening questions that can be useful for health service providers to trigger a dental referral. They can easily be incorporated into general health assessment processes. They are also beneficial for older people who can self-report.

A 'yes' to any of the 6 questions about natural teeth, mouth or dentures triggers a dental referral:

1. Do you have any of your natural teeth?
2. Have you had pain in your mouth while chewing?
3. Have you lost any fillings, or do you need a dental visit for any other reason?
4. Have you avoided laughing or smiling?
5. Have you had to interrupt meals?
6. Have you had difficulty relaxing?

Source: Slade 2007³⁴

Note: Some jurisdictions in Australia are using the 6 trigger referral questions from SA Dental Service within their ACAT processes. These questions have been recommended to be integrated into the National Comprehensive Assessment (ACAT assessment) and should be operational by 1 July 2015 for ACAT assessors and some home care regional assessment services.

SECTION 7: APPENDICES



APPENDIX A: ADDITIONAL INFORMATION AND RESOURCES

Name of resource	Type of resource	Development	Date developed	Web address	Section
Best care for older people everywhere - the toolkit 2012	Manual	Department of Health, Victoria	2012	http://docs.health.vic.gov.au/docs/doc/Best-care-for-older-people-everywhere-The-toolkit-2012	1, 2, 4, 5
Better Oral Health in Residential Care	Training package	SA Dental Service	2009	http://www.health.gov.au/betteroralhealthtraining	1
	Staff portfolio			http://www.health.gov.au/internet/main/publishing.nsf/Content/2E625F7A23ED6F71CA257BF0001B5D73/\$File/StaffPortfolio.pdf	5
	Professional portfolio			http://www.sadental.sa.gov.au/Portals/57ad7180-c5e7-49f5-b282-c6475cdb7ee7/BOHRC-Professiona-Portfolio-10-2-11.pdf	5, 6
Care of older people toolkit	Information	SA Dental Service		http://www.sahealth.sa.gov.au/wps/wcm/connect/public+content/sa+health+internet/clinical+resources/clinical+topics/older+people/care+of+older+people+toolkit/oral+health+care+domain+-+care+of+older+people+toolkit	1, 3, 4, 5
Dental Rescue: a guide for carers of the elderly	DVD	Peter King	2014	http://www.dentalrescue.com.au/	1, 4, 6
Oral health promotion tutorials	PowerPoint® presentations with voiceover	Oral Health CRC Ltd, University of Melbourne, Bupa Health Foundation Ltd	2014	http://www.e-dentalez.com/sitio/oral-health-promotion/	1, 2,3, 4

Name of resource	Type of resource	Development	Date developed	Web address	Section
Oral health for those who care: oral health in supported residential facilities	Manual	DHAA SA Branch Inc.	2013	Unpublished	1
Oral health care education session for older adults: a resource for Volunteer Peer Educators	PowerPoint® presentation and flip chart	COHS/CERA	2014	http://www.health.nsw.gov.au/oralhealth/pages/default.aspx	1, 3, 4, 6
Oral health policy	Policy	Public health association of Australia (PHAA)	2012	http://www.phaa.net.au/documents/130201_Oral%20Health%20Policy%20FINAL.pdf	1
Healthy ageing literature review 2012	literature review	Victoria	2012	http://www.health.vic.gov.au/agedcare/maintaining/downloads/healthy_litreview.pdf	1
Health literacy	Web information	National Network of Libraries of Medicine (USA)	2013	http://nnlm.gov/outreach/consumer/hlthlit.html	1
Evidence-based oral health promotion resource	Literature review	Department of Health, Victoria	2011	http://docs.health.vic.gov.au/docs/doc/1A32DFB77FEFBE9CCA25789900125529/\$FILE/Final%20Oral%20Health%20Resource%20May%202011%20web%20version.pdf	2, 3
End of day: the cost of poor dental health and what should be done about it	Report	Brotherhood of St Laurence	2011	http://www.bsl.org.au/pdfs/Richardson_End_the_decay_2011.pdf	2
Aboriginal oral health	Peer reviewed articles	Australian Indigenous Health Bulletin	Various	http://healthbulletin.org.au/category/topics/oral-health/	2
Guidelines to effective hydration in aged care facilities	Guidelines	Aged & Residential Care Services Heidelberg Repatriation Hospital	2007	http://www.hydralyte.com.au/the-science-of-dehydration/dehydration-and-the-elderly/	3
Vitamin D	Guidance	Australian Cancer Council	2014	http://www.cancer.org.au/news/news-archive/the-need-for-vitamin-d-cancer-council-puts-the-issue-in-perspective.html	3

Name of resource	Type of resource	Development	Date developed	Web address	Section
Your oral health	Brochure	University of Adelaide, Oral Health Promotion Clearing House		http://www.adelaide.edu.au/oral-health-promotion/resources/Your_Oral_Health.pdf	3
Australian guidelines to reduce health risks from drinking alcohol	Guidelines	NHMRC		https://www.nhmrc.gov.au/guidelines/publications/ds10	3
Teeth and denture care	Brochure	NSW Health	2014	http://www.health.nsw.gov.au/oralhealth/pages/default.aspx	3
Caring for your dentures	Brochure	NSW Health	2011	http://www.health.nsw.gov.au/oralhealth/Documents/denture-care-brochure.pdf	3
Soft options: tasty soft food choices	Brochure	Centre for Oral Health Strategy, NSW Health	2014	http://www.health.nsw.gov.au/oralhealth/Documents/Soft-Food-Options-brochure-April-2014.pdf	3
Tooth brushing technique	video	UK	2012	http://www.youtube.com/watch?v=IEGSK6r9PrQ	3
Gum recession and how to treat it	video	USA	2012	http://www.youtube.com/watch?v=x29jZh_hxzM	3
Australian dietary guidelines	Guidelines	NHMRC	2013	http://www.nhmrc.gov.au/_files_nhmrc/publications/attachments/n55_australian_dietary_guidelines_0.pdf	3
NSW Health statistics	Epidemiology information	NSW Health	2014	http://www.healthstats.nsw.gov.au/Indicator/inj_falloldhos	4
Aged Care - working with people with challenging behaviours in residential aged care facilities	Guidelines	NSW Health	2006	http://www.health.nsw.gov.au/policies/gl/2006/pdf/GL2006_014.pdf	5
Residential aged care facility oral health student placement program: the student experience	DVD	Centre for Oral health Strategy, NSW Health	2013	Contact: janet.wallace@newcastle.edu.au	5

Name of resource	Type of resource	Development	Date developed	Web address	Section
Delirium: care of the confused hospitalised older person	DVD	NSW Agency for Clinical Intervention Northern Sydney Local health District	2012	http://www.aci.health.nsw.gov.au/chops/education/delirium-videos	5
Healthy mouth healthy ageing: oral health guide for caregivers of older people	Manual	New Zealand	2010	http://www.pc.gov.au/__data/assets/pdf_file/0010/106759/subdr496-attachment1.pdf	5
Brushing up on mouth care	Education and resource package	Canada	2013	http://www.ahprc.dal.ca/projects/oral-care/	5
Best practices toolkit: implementing and sustaining change in long-term care	Web information	Canada		http://ltctoolkit.rnao.ca/resources/oralcare	5
Oral hygiene instruction for caregivers	Video	Canada	2013	http://www.youtube.com/watch?v=vc4hG_8t9nA	5
Dental hygiene for residents in long term care - part 1 - introduction				http://www.youtube.com/watch?v=-DIREyOIPkE	5
Dental hygiene for residents in long term care - part 2 - challenges	PowePoint® presentation with voice-over	USA	2013	http://www.youtube.com/watch?v=gVsgep8584I	
Dental hygiene for residents in long term care - part 3 - dry mouth				http://www.youtube.com/watch?v=hRcTpR4e7t8	

Name of resource	Type of resource	Development	Date developed	Web address	Section
Dental hygiene for residents in long term care - part 4 - denture care	PowePoint® presentation with voice-over	USA	2013	http://www.youtube.com/watch?v=wYhIZ2UYuws	5
Dental hygiene for residents in long term care - part 5 - prevention					
Oral health assessment	Video	SA Dental Service	2005	http://www.youtube.com/watch?v=zaDDzzeVD7Y	6
Myagedcare	Information	Australian Government		http://www.myagedcare.gov.au/	6
Aboriginal liaison program *Information about your oral health assessment	Fact sheet	SA Dental Service		http://www.healthinonet.ecu.edu.au/key-resources/promotion-resources?lid=21516	6

APPENDIX B: ORAL HEALTH ASSESSMENT TOOL

RESIDENT:

COMPLETED BY:

DATE:

RESIDENT-

- Is independent Needs reminding Needs supervision Needs full assistance
- Will not open mouth Grinding or chewing Head faces down Refuses treatment
- Is aggressive Bites Excessive head movement Cannot swallow well
- Cannot rinse and spit Wil not take dentures out at night

Healthy	Changes	Unhealthy	Dental Referral
LIPS			
<input type="radio"/> Smooth, pink, moist	<input type="radio"/> Dry, chapped or red at corners	<input type="radio"/> Swelling or lump, red / white / ulcerated bleeding / ulcerated at corners*	<input type="radio"/> Yes <input type="radio"/> No
TONGUE			
<input type="radio"/> Normal moist, roughness, pink	<input type="radio"/> Patchy, fissured, red, coated	<input type="radio"/> Patch that is red and/ or white / ulcerated, swollen*	<input type="radio"/> Yes <input type="radio"/> No
GUMS AND ORAL TISSUE			
<input type="radio"/> Moist, pink, smooth, no bleeding	<input type="radio"/> Dry, shiny, rough, red, swollen, sore, one ulcer / sore spot, sore under dentures	<input type="radio"/> Swollen, bleeding, ulcers, white / red patches, generalised redness under dentures*	<input type="radio"/> Yes <input type="radio"/> No
SALIVA			
<input type="radio"/> Moist tissues watery and free flowing	<input type="radio"/> Dry, sticky tissues, little saliva present, resident thinks they have a dry mouth	<input type="radio"/> Tissues parched and red, very little / no saliva present, saliva is thick, resident thinks they have a dry mouth*	<input type="radio"/> Yes <input type="radio"/> No

* Unhealthy signs usually indicate referral to a dental professional is necessary

ASSESSOR COMMENTS:

Healthy	Changes	Unhealthy	Dental Referral
NATURAL TEETH			
<input type="radio"/> No decayed or broken teeth or roots	<input type="radio"/> 1- 3 decayed or broken teeth / roots, or teeth very worn down	<input type="radio"/> 4 or more decayed or broken teeth / roots or fewer than 4 teeth, or very worn down teeth*	<input type="radio"/> Yes <input type="radio"/> No
DENTURES			
<input type="radio"/> No broken areas or teeth, worn regularly, and named	<input type="radio"/> 1 broken area or tooth, or worn 1-2 hours per day only or not named	<input type="radio"/> 1 or more broken areas or teeth, denture missing / not worn, need adhesive, or not named*	<input type="radio"/> Yes <input type="radio"/> No
ORAL CLEANLINESS			
<input type="radio"/> Clean and no food particles or tartar in mouth or on dentures	<input type="radio"/> Food, tartar, plaque 1-2 areas of mouth, or on small area of dentures	<input type="radio"/> Food particles, tartar, plaque most areas of mouth, or on most of dentures*	<input type="radio"/> Yes <input type="radio"/> No
DENTAL PAIN			
<input type="radio"/> No behavioural, verbal or physical signs of dental pain	<input type="radio"/> Verbal &/or behavioural signs of pain such as pulling at face, chewing lips, not eating, changed behaviour.	<input type="radio"/> Physical pain signs (swelling of cheek or gum, broken teeth, ulcers), as well as verbal & / or behavioural signs (pulling at face, not eating, changed behaviour)*	<input type="radio"/> Yes <input type="radio"/> No



SECTION 8: REFERENCES

- 1 Alzheimer's Australia. Dementia language guidelines. Available at <https://fightdementia.org.au/sites/default/files/full-language-guidelines.pdf> (Viewed 12 December 2014).
- 2 Department of Health Victoria. Action plan for oral health promotion 2013- 2017. Melbourne, Victoria: Prevention and Population Health Branch, Department of Health, 2013.
- 3 NSW Ministry of Health. Oral Health 2020: A strategic framework for dental health in NSW. Sydney: NSW Ministry of Health, 2013.
- 4 Chalmers JM. The oral health of older adults with dementia. PhD thesis. Adelaide: The University of Adelaide, 2001.
- 5 Watt R, Fuller S. Practical aspects of oral health promotion. In C Pine, R Harris, eds. Community Oral Health. United Kingdom, Quintessence, 2007;357-375.
- 6 Rogers JG. Evidence-based oral health promotion resource. Melbourne, Victoria: Prevention and Population Health Branch, Department of Health, 2011.
- 7 SA Dental Service. Care of older people toolkit. Available at <http://www.sahealth.sa.gov.au/wps/wcm/connect/public+content/sa+health+internet/clinical+resources/clinical+topics/older+people/care+of+older+people+toolkit/oral+health+care+domain+-+care+of+older+people+toolkit>(Viewed 5 November 2014).
- 8 Department of Health, Victoria. Best care for older people everywhere - the toolkit 2012. Available at <http://docs.health.vic.gov.au/docs/doc/Best-care-for-older-people-everywhere-The-toolkit-2012>(Viewed 5 November 2014).
- 9 Petersen P, Bourgeois D, Ogawa H, Estupinan-Day S, Ndiaye C. The global burden of oral diseases and risks to oral health. Bull World Health Organ 2005;83:661-9.
- 10 Hollister MC, Weintraub JA. The association of oral status with systemic health, quality of life, and economic productivity. J Dent Educ 1993;57:901-12.
- 11 Australian Institute of Health and Welfare. Health expenditure Australia 2010-11. Canberra: AIHW, 2012.
- 12 Chalmers JM. Oral health promotion for our ageing Australian population. Aust Dent J 2003 Mar;48(1):2-9.
- 13 Department of Human Services. Promoting oral health 2000-2004: strategic directions and framework for action. Melbourne, Victoria: Health Development Section, Public Health Division, Department of Human Services, 1999.
- 14 Wright C, Harrison D. Dental care for older Victorians: development of the Victorian Gerodontic Program. Melbourne, Victoria: Dental Health Service, 2002.
- 15 Australian Institute of Health and Welfare. Australia's Health 2008. Cat. no. AUS 99. Canberra: AIHW, 2008.
- 16 World Health Organization. What is the burden of oral disease? Available at: http://www.who.int/oral_health/disease_burden/global/en/ (Viewed 5 November 2014).
- 17 Australian Health Ministers' Advisory Council. Oral health of Australians: national planning for oral health improvement: final report. Steering Committee for National Planning for Oral Health. South Australia: AHMAC; 2001.
- 18 Watt RG. Strategies and approaches in oral disease prevention and health promotion. Bull World Health Organ 2005;83:711-8.
- 19 Southam JC, Soames JV. Dental Caries. In Oral pathology. 2nd ed. Oxford: Oxford University Press, 1993. ISBN0-19-262214-5.
- 20 Navarzes M, Kumar SK. Measuring salivary flow: challenges and opportunities. J Am Dent Assoc 2008 May;139 Suppl:35S-40S.
- 21 Adachi M, Ishihara K, Abe S, Okuda K. Professional oral healthcare by dental hygienists reduced respiratory infections in elderly persons requiring nursing care. Int J Dent Hyg 2007 May (2);5:69-74.
- 22 Yoneyama T, Yoshida M, Matsui T, Sasaki H. Oral care and pneumonia. Oral care working group. Lancet 1999 Aug 7;354(9177):515.

